

**Exploring the Facilitators and Barriers to Full Participation of
Male and Female Students who are Deaf or Hard of Hearing in
Saudi Elementary Inclusive Schools**

Submitted by

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Abstract

Full participation of all students in inclusive schools has become a global concern in many countries as they move towards inclusive education and inclusive teaching. This study explored the current state of full participation of Saudi elementary students (6-12 years) who are deaf or hard of hearing and gained insights into the nature of the facilitators and barriers to full participation analysed through inclusive teaching concepts and practices, and Vygotsky's cultural-historical theoretical lenses. A sequential explanatory mixed methods of quantitative and qualitative approaches, encompassing questionnaires and interviews were utilised to collect data from teachers, parents and students who are deaf/hard of hearing in Riyadh and Jazan in Saudi Arabia. The participants included 66 teachers from Riyadh and 82 teachers from Jazan who completed a 65-item questionnaire. In addition, eight teachers, six parents and five students participated in semi-structured interviews. A framework analysis of the data identified that the participants did not fully understand inclusive education, inclusive teaching and full participation. The participants referred to inclusion as integration and inclusive teaching as active teaching approaches. Again, full participation was conceptualised in terms of access to inclusive schools. In the participating elementary schools, while students who are deaf/hard of hearing expressed the desire to learn with their peers without a disability, they only had the opportunity to socialise with their peers during break and mealtimes, and were pulled out into disability groupings in their own self-contained classrooms or resource rooms. The schools thus treated students who are deaf or hard of hearing as an add-on to their student population on a socialising basis. Full participation of students who are deaf or hard of hearing and inclusive teaching are complex tasks that require support and a joint effort from a range of

stakeholders. Key barriers identified in this study include: lack of specialised professionals and services to support students' communication, unfavourable attitudes towards the concept of full participation of students who are deaf or hard of hearing in the same classrooms and segregation of students into separate classrooms based on their disability. Others are inadequate professional knowledge of general education teachers to teach students who are deaf or hard of hearing, workload issues and inadequate technological resources to cater to the needs of all students. Effective communication between teachers and parents, clear policy guidelines for full participation, specialist provision and training of teachers were identified as key facilitators to enhance the implementation of full participation in inclusive elementary schools in Saudi Arabia. These findings have led to context-specific recommendations that may help transform inclusive education, inclusive teaching and full participation of all students, including those who are deaf or hard of hearing in Saudi inclusive elementary schools.

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Chapter One: Introduction to the Study

1.1 Overview

This chapter introduces the study and its context. It begins with an overview of the background of the study, a description of the global and local policy and practice context in Saudi Arabia, and the my motivation for undertaking this study. In this chapter, a brief review of prior research serves to frame the current issues surrounding the concepts and practice of full participation of elementary students who are deaf or hard of hearing and in turn, identify the gaps in the existing literature, research problem and subsequently, the research questions of this inquiry. This is then followed by the significance of the study, aims and scope. The chapter concludes with a definition of the key terms.

1.2 Introduction

Since UNESCO's proclamation of inclusive education in Salamanca in Spain in 1994, many countries including the United Kingdom, the United States of America, New Zealand, Australia and the Kindom of Saudi Arabia have embraced the concept of inclusive education as a process to provide education for all. Saudi Arabia signed and ratified the UN Convention on the Rights Of persons with Disabilities in 2008. A core aspect of the pursuit of inclusive education is full participation (Berlach & Chambers, 2011; Florian, 2010). Despite significant achievements in expanding access to quality education in inclusive schools, full participation of students with disabilities remains a restricted education opportunity, which is mainly accessible to some students that most teachers consider are easy to teach (Armstrong et al., 2011; Booth &

Ainscow, 2011; Genova, 2015; Graham & Spandagou, 2011; Kliwer, 1998; Low, Lee, & Ahmad, 2018; Petriwskyj, 2010). The pursuance of quality education continues to be the driving force toward transformations in education systems worldwide to enable access and full participation of all students in inclusive schools (Armstrong & Barton, 2008; Berlach & Chambers, 2011; Jordan, Glenn & McGhie-Richmond, 2010; Thomazet, 2009). Some concrete indicators of this are the adoption of pragmatic policies, provision of more funding, professional support, and enhancement in teacher quality to support the full participation of students with disabilities and special education needs in inclusive schools (D'Alessio, 2011; Petriwskyj, 2010).

This study explored the facilitators and barriers to 'full participation' of male and female students who are deaf or hard of hearing in Saudi inclusive elementary schools (6-12 year olds). Full inclusion means that all students, regardless of their disability, special education needs or severity, will be in a regular classroom or programme with access to all services in that setting (Florian, 2010). Previous research findings indicate that full participation of students with disabilities in inclusive schools provide more opportunities for students to learn with their peers without disabilities to develop social and academic skills and contribute to building strong and cohesive societies (Cologon, 2013; Florian, 2010). It is believed that the adoption of the concept of full participation in inclusive schools may prevent special schools being used as "dumping grounds" for the difficult-to-teach students (Vallecorsa, deBettencourt & Zigmond, 2000 in Snowman & McCown, 2015, p. 194).

Despite the benefits of full participation, macro-and micro exclusionary practices continue to serve as barriers to full participation in inclusive schools or programmes. Macro exclusion is easy to recognise and occurs when a student

is “excluded from mainstream education and segregated into a ‘special’ school or a ‘special’ class or unit for all or part of the day, week or year (or denied education at all” (Cologon, 2013, p. 14). Micro-exclusion from full participation is situated in the lack of clear understanding of inclusive education resulting in schools’ lack of making modifications or adjustments in policy, pedagogy and practice to meet the educational and learning needs of all students (Cologon, 2013; D’Alessio, 2011; Florian, 2010). The term micro-exclusion was coined by D’Alessio (2011) to refer to the misunderstanding that physical presence or placement of students with disabilities in inclusive classrooms is inclusion. Students can remain segregated and excluded within a so-called inclusive setting when they do not fully participate in the programmes that the school offers. This is an important problem to address because student full participation is a human rights issue, and is fundamental to the principles of full inclusion (Runswick-Cole & Hodge, 2009).

The human rights perspective is to ensure an inclusive education system is a recognised obligation. In this sense, persons with disabilities are not excluded from the general education system on the basis of their disability rather, they are accorded rights to access an inclusive, and quality education on an equal basis with others in the communities in which they live with reasonable adjustments, accommodations and support that maximise their academic and social development, consistent with the goal of full inclusion (Broberg & Sano, 2018; Schulze, 2010). Rights-based conceptualisation of full participation does not see inclusive education as part of charity or generosity, but as part of educational efforts to fulfil rights (Broberg, & Sano, 2017; Gable, 2014; Genova, 2015; Oliver & Barnes, 2010). Although the human rights approach seemed laudable, there has been several criticisms and that the human rights-based

approach is not suitable for all types of special education provision and it is not suitable for all types of persons with disabilities; it tends to be more political than practically oriented, and promotes inappropriate service delivery to some students (Broberg, & Sano, 2017; Runswick-Cole & Hodge, 2009).

Despite these criticisms, some inclusive reformers have proposed the adoption of inclusive teaching in schools by focusing on human-rights to enact quality inclusive education (Florian, 2009, Florian & Spratt, 2013). These inclusive reformers argue that if implemented properly, inclusive teaching can enable all students with disability full access to the general education curriculum (Florian, 2009, Florian & Spratt, 2013). Inclusive teaching is based on the philosophy that every student's capacity to learn is changeable. This means, what teachers choose to do (or not to do) in the present can alter a student's learning capacity for the future (Spratt & Florian, 2014). In this sense, inclusive teaching challenges the notion of using 'bell-curve' measures and replacing it with the concept of 'transformability' (Florian & Spratt, 2013). On the one hand, bell-curve informed practices consider some students as 'normal' and others as 'not normal'. On the other hand, the concept of transformability believes that every student if provided with the required support, can learn and achieve to their fullest potential. This way, the focus is on social justice, full access and equity in education. Applying the concept of transformability to students who are deaf or hard of hearing, which is the focus of this study, implies that every student is seen as an "active meaning-maker, who uses their personal and social resources to make sense of the world as they experience" learning with inclusive teachers and peers (Nind, Flewitt, & Theodorou, 2015, p. 342).

Although the above inclusive education practice reform approach in terms of full participation seems sound, issues surrounding its practicality are yet to be

investigated in the Saudi Arabian context. If inclusive reform efforts toward full participation of students are to be more successful, there is a need for further investigation to understand the ways teachers and parents think about the facilitators and barriers to full participation orchestrated through inclusive teaching.

1.3 Developing interest in the problem

My motivation to carry out this study has been greatly influenced by my many years of working as a teacher educator in the university sector. The inspiration for this research emerged from my professional experience as a teacher educator of students who are deaf or hard of hearing in Saudi Arabian Special Education Department at King Khalid University. As teacher educator in special education, I have worked with special and inclusive schools on professional development initiatives and supported classroom teachers to design programmes to engage students in learning. I witnessed how the Saudi education system has experienced numerous random policy changes, and how the current inclusive and special education policies implicate a need for a rapid transformation to enable full participation.

Throughout my professional experiences in Saudi Arabia, I have encountered teachers who associated academic success with privilege or disadvantage in reference to students' social status or disability. This is compounded by the fact that most Saudi people including some teachers view disability through a medical model in which people with disabilities are viewed as sick and in need of a cure (Aldabas, 2015; Alquraini, 2014). In this sense, students with deafness receive "partial inclusion in which there are special units or classes within the general school with only some inclusive classes and activities" (Alothman, 2014, p. 13). Although many teachers are positive about

inclusive education, as an insider professional in the Saudi Arabian context, I was conscious of the disadvantages, for example, the inability of some deaf or hard of hearing students to access the general education classroom and learn with their peers without disabilities. My awareness grew as a teacher that I had every advantage as a teacher educator and researcher in promoting further awareness and professional learning through advanced research on the concepts and practices of full access to and participation in inclusive schools. I believe that by uncovering the critical factors that are implicated in full participation of students who are deaf or hard of hearing, targeted improvements in teacher professional learning can be made to increase students' educational success. It was around this very acknowledgment of how research has the potential to contribute to full participation of students who are deaf or hard of hearing that my subjective tensions arose as I struggled with making this a reality in the elementary context of Saudi Arabia where the concept and practice of inclusion are relatively new.

I have an assemblage of unanswered questions that emerged from my experiences working with students who are deaf or hard of hearing and these all shape how I think about inclusive education. As education practitioners, we all have experiences, hold beliefs and values which affect our thinking, and in turn our research agendas. Gadamar (1975) observed that it is impossible to escape from our pre-understandings, even temporarily when we search for truth. It can be argued that one's preunderstandings can lead to being more open-minded, or close-minded and determine the starting point of acquiring additional or new knowledge (Scott & Usher, 1996). Indeed, my previously unanswered questions on lack of full participation of students who are deaf or hard of hearing puzzled and frustrated me; however, this resulted in the urge to discover how to better

research inclusion at a higher-level and understand current practices comprehensively. More specifically, to glean a clearer and more in-depth understanding of the facilitators and barriers to full participation and inclusive teaching to improve practice in this field. I believe this exploration will be beneficial to shifting away from negative views and to embrace positive mindsets based on possibilities enacted through full participation and inclusive teaching.

Additionally, my urge to do this research was shaped significantly by diversity in student disability and learning needs, social and emotional factors and identity. For example, I became aware of the variabilities among deaf or hard of hearing students through my readings in this field. To this end, my teaching experience at a classroom level shares complexity faced by so many in this profession who are committed to improving outcomes and offering quality education for all students with and without disabilities learning together. I found myself needing to negotiate many policies and practice agendas from diverse perspectives with colleague leacturers and families. Coupled with my own commitment, drive and philosophy of best practice to operate on the principle of full participation, I was confronted by how difficult it was to meet the individual needs of students who are deaf or hard of hearing in inclusive school despite shared commitment to delivering high-quality education for all students that are based on the principles of full participation.

Thinking about my practice and ideas my engagement with other students in scholarly activities, I have been challenged to step-back and examine my thinking by asking and responding to probing questions from colleagues and academics. Stepping back from one's position is one of the instigating factors towards deciding on a doctoral research topic (Shulman et. al, 2006). Since I

started brainstorming ideas for my doctoral programme, I began to read papers in the area of full participation and at the same time maintained regular contact with colleagues where I discussed my intentions and need to explore the area of full participation. I can see many possibilities for my future profession along the lines of my scholarly inquiry, that is within the inclusive education researchers' community. My future professional aspirations also sparked my interest to engage further in informal discussions with academics in the field which triggered a lot of critical thinking.

First of all, I began with several floating research ideas but with further reading and thinking supported by external advice, my topic of "Full participation of students who are deaf or hard of hearing in inclusive elementary schools in Saudi Arabia" was born. The brainstorming sessions also led to the identification of Vygotsky's cultural-historical framework as the appropriate theoretical framework for my investigation because my research focus is on the full participation of students who are deaf in a cultural context where disability is impacted by traditional cultural attitudes and practices.

1.4 The research context

This research is situated in the Kingdom of Saudi Arabia, which is the largest state in Western Asia occupying an area of more than 2 million km² with 31.7 million predominant Muslim population. The kingdom was founded in 1932 by King Abdula-Aziz Bin Saud (Alrashidi¹ & Huy Phan, 2015). Riyadh, the largest city, serves as the Capital with Arabic as the main spoken language. The state religion is Wahhabism, an ultra-conservative form of Sunni Islam practised by the majority of the population (85%) and the other 15% being Shia Muslims. The number of non-Muslims is difficult to assess, as there are no official statistics. Many foreigners are Muslims but there are Christians and

Hindus however, no groups are permitted to build churches or temples, and non- muslims worship privately with many restrictions. Interestingly, Saudi Arabia is also home to Mecca, Islam's holiest city, which is the birthplace of the Prophet Muhammad (Ministry of Culture and Information, 2013).

According to Alrashidi and Phan (2015), "the education system in Saudi Arabia has transformed immensely since its inception in 1925" (p. 34). Records indicated that prior to 1925 education occurred in mosques and Qur'anic Schools, with emphasis on writing, reading Arabic and reciting the Holy Qur'an (Al-Liheibi, 2008; Alsharif, 2011). Contemporary formal education can be traced to the establishment of the Directorate of Education in 1925 by King Abdul-Aziz before the unification of the whole country and the proclamation of the Kingdom of Saudi Arabia in 1932 (Alsharif, 2011: Alrashidi1 & Phan, 2015). Although formal education started in 1925 it was limited to a selected few (Al-Harthi, 2014).

In 1930, the Directorate of Education opened the first public schools, that provided formal education exclusively to males (Alsharif, 2011; Wiseman, 2010). However, traditional cultural and conservative religious views from tribal leaders served as barriers to women's education. For example, many people in some regions of the country viewed non-religious education as nothing but a waste of resources on girls. As time continued, advocacy and public push for girls' education gradually dismantled the poor attitude toward girls' education (Almutairi, 2007). Indeed, the inclusion of girls in formal education in 1960 was implemented on a segregated basis, that is female students were separated from males into schools (Al-Zarah, 2008). Men are forbidden from teaching or working at girls' schools and women are disallowed from teaching at boys' schools in the exception of distance education and the use of screen barriers to

allow male teachers to reach female students by distance. In this way, inequality is not only associated with a disability but gender.

Currently, the education system operates on a single-sex school that can be explained in terms of conservative beliefs of Islam, cultural, social and traditional values (Wiseman, 2010). A segregated system is replicated in many Middle East countries including Bahrain and Jordan whose educational principles are influenced by the conservative Islamic religion and Arabic cultural system (Alrashidi & Phan, 2015; Fryer & Levitt, 2010). It is argued that “private schools in Saudi Arabia are allowed to have first to third graders of both genders study side by side in the same classroom; however, only a few schools apply this option” (Felimban, 2013, p. 5).

1.5 Context of special education and education for deaf or hard of hearing students

This study focuses on understanding the practices of full participation of deaf or hard of hearing students in inclusive schools, therefore, it is important to provide a brief account regarding special education to frame the problem. As indicated in the brief historical development of education in the previous section, educational provision, affordability, and access in Saudi Arabia were initially limited to a privileged population in the 1930s. Coupled with this, there is a fragmentation and slow-pacing of educational development. For instance, approximately 300 schools provided education to a small urban population in the 1930s. In the 1970s Saudi Arabia used its massive oil revenue to boost rapid expansion in infrastructure and build more schools. Alquraini (2014), referring to the Ministry of Education 2012 report indicated that there are 26,934 schools that serve almost 5 million students (boys and girls) from kindergarten to the high school level with almost a half-million teachers (men and women). A

current report from the ministry, on the other hand, puts the records as 47,325 schools offering educational provision to nearly five million students, in both Rural and Urban areas with more than 420,443 teachers (Ministry of Education, 2014).

An area that benefited from this massive expansion is the special education sector with emphasis on shifting practices from segregated schooling to mainstreaming programmes with a strategic move towards inclusive education. To support students with special needs to have fulfilling lives, the Saudi government made several provisions including monthly compensation for academic and living costs, funding for disability equipment, free transportation, 50% reduction in airfare when students with disability travel to other locations by air for educational purposes, and granting scholarships to gifted students with disabilities (Ministry of Education, 2001).

Historically, formal education for students with disabilities in Saudi Arabia began with individuals with visual impairment. Currently, the Ministry of Education expanded special education services for each type of disability. Also, various departments and programmes including departments for Programmes for Gifted and Talented Children, Educational Awareness, Research and Development, Public Relations and Administrative Affairs, and Students' Accommodations have been established to serve students with disabilities (Ministry of Education, 2014). The Education for all Handicapped Children Act in 1975, provided the impetus for Saudi Arabia to implement mainstreaming as the main process of educating students with disabilities. In 2000, the Saudi government established the Provision Code for individuals with disabilities (Al-Mousa, 2010) with key elements of the code guaranteeing the rights of students with disabilities a free and appropriate education in the least restrictive

environment such as inclusive education. In addition, the Saudi government in 2002, promulgated the rules and regulation affirming inclusive education of students with disabilities in regular schools (Alquraini, 2014; Ministry of Education, 2002). To strengthen capacity in this pursuit, the Saudi government ratified the convention on the rights of persons with disabilities and its Protocol in 2008 with inclusive education orientation as its core educational focus (Al-Mousa, 2010).

Traditionally Saudi values and religious practices view disability in negative terms. For example, conservative traditional religious view regards persons with disability as those receiving punishment for the sins they or their family members have committed against Allah (God) or another individual in society (Alquraini, 2014). On the other hand, some people regard having a disability as a test of faith or challenge from Allah “for either the person or his or her family to see if they will be patient in order to enter Paradise, the holy place prepared by Allah for those who follow the rules of the Qur’an and the Sunnah” (Alquraini, 2014, p. 507). The former view often leads to considering a person with a disability as of less value and the individual becomes social ridicule.

Several studies have investigated attitudes toward students with disabilities in the Saudi Arabian context (see Al-Marsouqi, 1980; Al-Sartawi, 1987; Al-Muslat, 1987; Sadek, Mousa, and Sesalem, 1986). These studies conclude that college majors, gender, age, prior experience, education level, cultural and religious values/practices and the specific disability can influence one’s attitudes. Currently, there is a growing awareness of disability issues and movement towards inclusive practices are influencing positive attitudes towards persons with disabilities. This growing acceptance and engagement can be traced historically to the early efforts of families to gain support for special

education and the establishment of Special Education programmes at King Saud University as a strategic move to train local special education teachers and experts to support the development of teacher education and improve the quality of special education (Aldabas, 2015; Alrashidi & Phan, 2015).

As a developmental approach, the Saudi government requested that personnel from the Special Education Department under the Ministry of Education and some local academic staff of the special education faculty at King Saud University with foreign doctoral degrees from the United States, support a review of the Saudi special education provisions along the lines of the American Individuals with Disability Education Act (IDEA, 1997). These pragmatic efforts resulted in the 2001 Regulations of Special Education Programmes and Institutes (RSEPI) which introduced the first special education regulations for students with disabilities in KSA (Alquraini, 2013, 2014). Ten categories of disabilities are served under the RSEPI namely: hearing disabilities, visual disabilities, intellectual disabilities, learning disabilities (LD), gifted and talented abilities, autism, multiple disabilities, physical and health impairment, communication disorders, and emotional and behavioral disorders (Alquraini, 2014).

1.6 Students with deafness or hard of hearing

This study focuses on the facilitators and barriers to the full participation of students who are deaf or hard of hearing. The Ministry of Education in Saudi Arabia (2001) defines students with deafness as those who have severe or profound hearing loss and use sign language for communication and general school/classrooms as those settings which are prepared only for students who do not need any special education or intervention. Literature indicated that historically, students who are deaf were deemed to be uneducable due to their

inability to use language in the same ways as their typically developing peers (Mcanally et al., 1994). As education systems developed further students who are deaf or hard of hearing were educated in special institutions and schools (Smith et al., 2004). John Wallis 1616-1703 and William Holder 1616-1698 of the Royal Society initiated the education of deaf students in the UK, where students learnt through writing manual alphabets to develop language and speech communication skills and gestures as a way to build functional language system communication. Followed by this was Joseph Watson (1765-1829) who promoted the use of fingerspelling and natural gestures to supplement speech (Mcanally et al., 1994).

In 1792, the first UK school in London for deaf students was opened by Braidwood and Watson followed by another school in Edinburgh in 1810 and in Birmingham in 1812 (Alothman, 2014; Giangreco et al., 1996). Ironically, the Education Act 1944 became a significant milestone for the education of deaf children in the UK followed by the Warnock report (1978) and Education Act (1981) which constitute the building block for students with SEN including deaf education (Alothman, 2014; Al-khashrmi, 2000).

Saudi Arabia's education of deaf students started in Al-Amal Institute in Riyadh in 1964 with training and health care for deaf students (Alothman, 2014). Saudi Ministry of Education's department of special education is in charge of providing education programmes for deaf students including sensitising parents about the benefits of special education for students who are deaf. This has culminated into the expansion of schools for deaf students in each province of Saudi Arabia (Al-Musa, 1999).

Education provision for students who are deaf in Saudi Arabia has undergone remarkable changes since its inception in the 1960s. For example,

there is a strong movement towards inclusive education. This has led to a shift in thinking and functions of special schools such as serving as in-service training centres, information and support service centres, and alternative service delivery models for students with mixed and severe disabilities for whom inclusive schools may not be the appropriate placement option (Al-Musa, 1999; Allothman, 2014). On the one hand, there has been growing interest from the Ministry of Education and parents to educate deaf students in inclusive schools (AlRayes, 2005; Al-Musa, 2008). On the other hand, this growing interest has created a major challenge in terms of the quality of teaching in inclusive schools to support students who are deaf to achieve enhanced educational outcomes (Al-Turkee, 2005). Inclusive school or classroom is also defined as those designed to meet the needs of students with special needs. These classrooms also include typically developing peers. However, the inclusion of students with disabilities in Saudi Arabia is considered partial inclusion. According to a publication by Alquraini (2014), “students classified with hearing impairment or as hard of hearing represent approximately 13%, or a total of 6,219 (4,613 male and 1,606 female) students out of the entire school-age disability population” (p. 512). Some of these students are educated in special schools, while others receive their education in inclusive schools or classrooms. In comparison, UK reports indicate that some 900,000 adults are classified as ‘severe or profoundly deaf’ and more than 45,000 children are classified as deaf (Action on Hearing Loss, 2017). CRIDE's (2015) survey also reported a total of 48,932 deaf children in the UK on 31st January 2015 and that approximately 85% of deaf children are taught in mainstream schools (Berry, 2017).

Interestingly, the development of special education in Saudi Arabia is the move from segregation towards inclusive education. The Ministry of Education

(2001) describe inclusion as teaching students with special needs in general schools, including the provision of special education teachers and services, whether full time or on a partial inclusive basis. The provision of access to the least restrictive learning environment was aimed at meeting the unique needs of students with disabilities and to support them in obtaining the necessary skills that will assist integrating them so that they can live independently in society (Alquraini, 2013).

The Saudi Arabian Regulations of Special Education Programmes and Institutes (RSEPI) places emphasis on students with disabilities to be educated in general education. Individual Education Plan (IEP) is mandated to make responsible decisions regarding the placement of students with disabilities, taking into consideration a continuum of alternative placements. This means special education services are to be provided to students with disabilities in the real world or the least restrictive setting that enhances the individual student's full participation and discourage or eliminate exclusion and segregation. It is believed that this will increase opportunities for acceptance and tolerance by other Saudi citizens (Alquraini, 2013, 2014).

1.7 Statement of the problem

Education by and large in Saudi Arabia has been and continues to be highly prioritized. In the context of inclusive education for all, the concept and practice of full participation are at an embryonic stage and there are many issues that are impacting on its lack of implementation. The RSEPI necessitates the use of the least restrictive environment for the provision of education for students with disabilities to learn with their typically developing peers, however, students who are deaf or hard of hearing usually receive their education in segregated classrooms or special schools, private institutions, and self-

contained classrooms within an inclusive school (Al-Ahmadi, 2009; Al-Mousa, Al-Sartawi, Al-Adbuljabar, Al-Batal, & Al-Husain, 2006). The special education curriculum is the same as the regular education curriculum, but with special modification and accommodation based on the type of disability. Students who are deaf or hard of hearing are educated by both special education and general education teachers. Itinerant teachers with specialisation in deaf education provide support for general education teachers in general education classrooms or students in a resource room.

Battal (2016) reported that out of the estimated 665000 total reported disability student populations in Saudi Arabia, speech or language impairments constitute 2.9 % (N=145000) and hearing impairment 0.2% (N=10000). Official reports showed that nearly 78% of Saudi students who are deaf or hard of hearing attend regular schools, while only 22% are enrolled in Special Schools for the Deaf (Aseery, 2016; Ministry of Education, 2013). Comparing these statistics to that reported by Alquraini (2014) leads to the fact that there is discrepancy between data sources in Saudi Arabia for this group of learners. The inclusion process is still merely partial (AlSharani, 2014). Most students with deafness in Saudi Arabia are placed in self-contained classrooms within the regular schools and are taught by a teacher who is trained to teach them. These students only get the opportunity to interact with hearing peers before classes, during recess, and after school but they never receive instruction in the regular classrooms (AlSharani, 2014). In addition, the majority of students who go to regular schools have mild to moderate hearing loss and use hearing aids, while most students with severe to profound hearing loss typically attend special schools for the Deaf (AlSharani, 2014).

Also, despite considerable reform efforts in enabling full access to students who are deaf or hard of hearing in inclusive schools, not much research into full participation appears to have been done, particularly in the Saudi Arabian context. A few studies conducted in Saudi Arabia found negative teacher attitudes related to the degree of disability and inadequate support for students all of which influenced the participation of students who are deaf or hard of hearing (Al-Mousa, 2010; AlSharani, 2014; Aseery, 2016). Another key issue related to this field of full participation in inclusion is the understanding of the concept of full participation. This means, having deeper insights into student differences and how to deal with differences in schools, in classrooms and in the curriculum in general to enable access, participation and achievement. With full participation in mind, the issue is no longer about what inclusion is and why it is needed rather, the key question is how well-established support systems are helping every student to realise their achievement goals (Florian, 2009).

There are gaps between policy and practice and there are systemic problems in implementing and evaluating existing services. For example, the argument can be made that despite Saudi Arabia's policy efforts, huge investments in resources and teacher training to enhance inclusive education, full participation of students who are deaf or hard of hearing remains as one of the most urgent problems (Aldabas, 2015; Al-Mousa, 2010). Participation of students who are deaf or hard of hearing is hindered by access to inclusive schools, poor pedagogical practices and the quality of support where all students feel connected and belong to school (Al-Mousa, 2010; Alquraini, 2011, 2014).

Concerns about the participation of students who are deaf or hard of hearing in inclusive schools in Saudi Arabia connect to mainstream teachers'

attitudes and lack of support from principals and parents (Alothman, 2014). Some teachers think that they do not have the requisite knowledge, therefore, students with disabilities would better be served in special schools (Al-Mousa, 2010, Alquraini, 2014). One of the critical measures of inclusive education is students' experience of full participation (Voltz, Brazil & Ford, 2001). The problem of what makes students who are deaf or hard of hearing connect themselves to school, and how their full participation is ensured have not been explored in Saudi Arabia.

In particular, in the case of this study, efforts to educate students who are deaf or hard of hearing in inclusive schools in Saudi Arabia continue to receive mixed reactions from parents and teachers (Aldabas, 2015; Alothman, 2014). Previous research suggested that even for those students who gained partial access to inclusive schools in Saudi Arabia, concerns have been raised by parents and teachers about the effectiveness of pedagogy and how these students were accessing all curriculum areas (Aldabas, 2015; Al-Mousa, 2010). This difficulty may be associated with the fact that the philosophy and practice of full participation in inclusive education require significant fundamental changes in policy, the roles of special and regular educators, and the entire teaching and learning process (Biklen & Burke, 2006; Cologon, 2013; Florian, 2010; Slee, 2004).

If inclusive schools remain unchanged in policy and pedagogical practice, the whole rationale for orchestrating full participation by students who are deaf or hard of hearing in inclusive schools in Saudi Arabia will remain at the bud stage. Consequently, as there is not much research into facilitators and barriers to the full participation of students who are deaf or hard of hearing in Saudi Arabian inclusive education systems, it is important if full participation is to have

a chance that research in this area will be conducted. Specifically, the proposed research is based on the philosophy that the identification of facilitators and barriers to full participation of students who are deaf or hard of hearing in Saudi inclusive schools can serve as the basis for educational reform in this area.

1.8 Research purpose and aims

The purpose of this research study is to investigate the current state of full participation of elementary students (6-12 years) who are deaf or hard of hearing and gain insights into the nature of the facilitators and barriers to the full participation, analysed through inclusive pedagogical concepts and practices, and Vygotsky's cultural-historical theoretical lenses. This study used mixed methods of qualitative and quantitative approaches, encompassing questionnaires and interviews records from the field. The intent was to capture perspectives and the essence of lived experiences by listening, thinking, and letting people talk (Lichtman, 2013). The specific aims are to describe the major facilitators and barriers to the full participation of students who are deaf or hard of hearing in inclusive schools in Saudi Arabia by:

- Exploring the knowledge, understanding, and attitudes of schools' teachers and parents regarding full participation of students who are deaf or hard of hearing.
- Determining teachers' understanding of inclusive teaching in supporting students who are deaf or hard of hearing to fully participate in inclusive education.
- Determine participants' perspectives about current inclusive policy frameworks.

- Examining the facilitators and barriers to full participation in the inclusive education of students who are deaf or hard of hearing.
- Contributing to the broader literature on full participation in inclusive education for students who are deaf or hard of hearing.

Table 1 Showing connections between research aims, research questions and data sources

Research aims	Research questions	Data sources
Exploring the knowledge, understanding, and attitudes of schools' teachers and parents regarding full participation of students who are deaf/hard of hearing	1. What are teachers' and parents' attitudes toward full participation of students who are deaf or hard of hearing in inclusive schools?	Questionnaire Interviews
Determining teachers' understanding of inclusive teaching in supporting students who are deaf/hard of hearing to fully participate in inclusive education.	2. How do teachers understand the concept of full participation and inclusive teaching? 3. How is full participation enacted in the inclusive schools?	Questionnaire Interviews
Determine participants' perspectives about current inclusive policy frameworks.	4. What are the perspectives of parents and teachers regarding the current Saudi inclusive educational policies?	Interviews
Examining the facilitators and barriers to full participation in the inclusive education of students who are deaf/hard of hearing	5. What do teachers, parents and deaf students consider the facilitators and barriers to full participation in inclusive schools?	Questionnaire and interviews with teachers and parents Interviews with students.
Contributing to the broader literature on full participation in inclusive education for students who are deaf/hard of hearing.	RQs 1, 2, 3, 4, 5	All data sources

These aims are the first step to improving educational access and participation in inclusive schools because if teachers and parents have a sound understanding of the concept of full participation, and the facilitators and barriers they commonly face, then they can collaborate and potentially design transformative approaches which can support more students who are deaf or hard of hearing in inclusive schools.

1.9 Research questions

1. What are teachers' and parents' attitudes toward full participation of students who are deaf or hard of hearing in inclusive schools?
2. How do teachers understand the concept of full participation and inclusive teaching?
3. How is full participation enacted in the inclusive schools?
4. What are the perspectives of parents and teachers regarding the Saudi inclusive education policies?
5. What do teachers, parents and deaf students consider the facilitators and barriers to full participation in inclusive schools?

1.10 Research scope and significance

This study focuses on the full participation of elementary school students (6-12 years) who are deaf or hard of hearing in inclusive schools. The study included male and female teachers who taught this age group. In addition, parents and their children who attend the inclusive schools were included in the study. This study is significant in three important ways, all of which point to transformation as a process involving the combined influences of policy, theory, and practice. First, interview with teachers and parents about their understanding and perspectives of the prevailing policies and their effectiveness

can contribute insight into policy on inclusive education in Saudi Arabia. Their perspectives were important in analysing how existing policies support or not support the full participation of students who are deaf or hard of hearing in inclusive programmes. It also serves as a pointer to how school-based policies can be developed to include parental participation to promote the concept and practices of full participation. Second, the study contributes to using the cultural-historical theory to deepen the understanding of the concepts of inclusive teaching and full participation. In particular, it challenged the deficit view of students orchestrated through 'bell-curve' thinking.

Finally, this study is significant for practical reasons. It provides some targeted practical recommendations that can be implemented at the local school level to support teachers to enact the practice of full participation of students who are deaf or hard of hearing in inclusive schools. It also opens windows of opportunity for further research in the area of full participation enacted through inclusive teaching.

1.11 Definition of terms

Barriers – Factors or practices that inhibit access, effective teaching, learning and participation in inclusive schools or programs.

Deaf students - students who have severe or profound hearing loss and use sign language for communication (British Deaf Association, 219).

Hard of hearing students – students who have some residual hearing and use hearing aids in some situations (British Deaf Association, 219).

Facilitators – Factors and resources that support or promote quality education in inclusive programs.

Full participation - Full inclusion means that all students, regardless of their disability, special education needs or severity, will be in a regular classroom/program with access to all services in that setting (Florian, 2010).

Macro-exclusion - is easy to recognise and occurs when a student is “excluded from mainstream education and segregated into a ‘special’ school or a ‘special’ class/unit for all or part of the day, week or year (or denied education at all” (Cologon, 2013, p. 14).

Micro-exclusion – applies to the lack of clear understanding of inclusive education resulting in schools’ lack of making modifications or adjustments in policy, pedagogy and practice to meet the educational and learning needs of all students (Cologon, 2013; Florian, 2010).

Inclusive teaching - an approach to teaching that aims to raise the achievement of all children, whilst safeguarding the inclusion of those who are vulnerable to exclusion and other forms of marginalisation. It incorporates dynamic practices and learning styles, multicultural content, and varied means of assessment, with the goal of promoting all student academic success, as well as social, cultural, and physical well-being (Florian, 2010; Florian & Spratt, 2013).

RSEPI - Regulations of Special Education Programs and Institutes. This is a Saudi Arabian policy that guides programs and practices of Special Schools.

Chapter Two: Literature Review and theoretical Framework

2.1 Section A: Literature Review

2.1.1 Introduction

The previous chapter presented the background of the research, the research context, problem statement, research questions and their significance to scholarship. This literature review chapter has two sections. Section A presents a review of the global and local issues related to inclusive education. The issues discussed in the literature review of this study include key concepts of inclusive education, empirically informed practices of inclusive education and issues related to the full participation of students who are deaf or hard of hearing such as barriers and facilitators. The literature review helped in identifying current trends, agreements, social and medical models of disability, and debates regarding full participation of students with disabilities in inclusive schools. By analysing the history or recent contributions to the field, a strong framework was created for the research, positioning this piece of research in studies already undertaken in this field (Poulsen & Wallace, 2004). Furthermore, the review of the literature presented here provided conceptual and empirical review to lead a greater understanding of the key concepts such as 'full participation' 'inclusive teaching', and related issues pertaining to the research topic, through synthesising and critically assessing the relevant literatures (Jesson, Matheson, & Lacey, 2011). It is by linking the literature to the field of practice that the research and practice gaps can be bridged (Grima-Farrell, Bain, & McDonagh, 2011).

Section B of the review presents the theoretical framework upon which the study is built. It reviews and critically analyses some key concepts in the cultural-historical theory to inform key ideas related to disability and students who are deaf or hard of hearing accessing full inclusion in their social and cultural communities.

2.1.2 Inclusion -A global perspective

The present study explores the concept and practice of full participation of students who are deaf or hard of hearing in Saudi Elementary schools thus unfolding the following aims: First, is to explore the knowledge, understanding, and attitudes of schools' teachers and parents regarding full participation of students who are deaf or hard of hearing in inclusive elementary schools. Second, is to examine the facilitators and barriers to full participation in the inclusive education of students who are deaf or hard of hearing and determine teachers' understanding of inclusive teaching in supporting students who are deaf or hard of hearing to fully participate in inclusive education. These aims are complex, as they are embedded in a social and cultural context in which inclusive education is relatively new, and ideological, religious beliefs and cultural practices impede the development and implementation of full inclusive education of students with disabilities.

Globally, current research into inclusive education for students with disabilities draws attention to access, participation and transformation in teacher attitudes (Agbenyega & Klibthong, 2013; Kraska, & Boyle, 2014; Mintz & Wyse, 2015; Veck, 2014). In the early 1980s, inclusion began in the United States and Europe as a special education initiative to provide educational access to students with a disability (Ferguson, 2008). While at this time inclusive education was mostly focused on expanding access, current inclusive initiatives

are more inclined towards whole school approaches that provide full participation and quality education to all students with or without disabilities in non-restricted settings (Berlach & Chambers, 2011; Loreman, 2013). Warnock (2010) for example, advocated for new thinking with regards to special education provision too for students with special education needs. Over the last few decades, there has been an aim to enrich the conceptualisation of inclusion to include perspectives that are more linked to quality education for all (Jordan & Ramaswamy, 2013; UNESCO, 2000; Warnock, 2010). In this context, the conceptualisations and practices become broadened and complex. In Canada, the Department of Education, New Brunswick (2013); for example, defines inclusive education as:

...a pairing of philosophy and pedagogical practices that allow each student to feel respected, confident and safe so he or she can learn and develop to his or her full potential. It is based on a system of values and beliefs centred on the best interests of the student, which promotes social cohesion, belonging, active participation in learning, a complete school experience, and positive interactions with peers and others in the school community (p. 2).

This definition is broad as it calls for incorporating ways that are culturally relevant, and allows for successful participation, learning, and wellbeing of all students in society. In this way, inclusion defies simple explanation, especially with a global context where its meaning and significance arise from the context in which it is implemented rather than the policy that defines it (Jordan & Ramaswamy, 2013; UNESCO, 2009). The literature states that current thinking needs to be refined to consider the uniqueness of various countries, and consequently discover new diversity and inclusion opportunities for individuals and organisations (Roberson & Stevens, 2006).

There are multiple factors that influence the conceptualisation and delivery of inclusive education, and its effectiveness varies across different countries (UNICEF, 2013). Perceptions of fairness and equity are related to inclusion, and research shows these can vary across cultures as well (Berlach & Chambers, 2011; Roberson & Stevens, 2006). Thus, it is important to be aware and critically consider institutional and cultural influences on inclusion particularly, when thinking about the concept and practice of full participation. Farndale, Biron, Briscoe and Raghuram (2015) suggest further research to improve knowledge of various diversities within countries and among individuals with disabilities in order to make sense of the inclusion practices that are used in other parts of the world. Furthermore, international resolutions such as Education for All (EFA) project and the Salamanca Statement on inclusive education by UNESCO uphold inclusion and fairness in education (UNESCO, 1994, 2000).

As inclusive education originated in Western countries, specifically the US, it is important to consider some of the inclusive education practices taking place in the US and Canada as well as Europe before considering the local situation in Saudi Arabia. In most provinces in Canada, education is provided for students with disabilities including those who are deaf or hard of hearing in the general education classroom (Eriks-Brophy and Whittingham, 2013). For example, the Canadian Hearing Society (CHS) developed a Barrier-Free Education Initiatives Project which was funded by the Ministry of Education with the purpose to assist the education sector in creating an accessible and barrier-free learning environment for students who are Deaf or hard of hearing in publicly-funded schools in Ontario (CHS, 2015). This initiative was to enhance access and participation, improve educational outcomes and student success.

A study by Eriks-Brophy and Whittingham (2013) of 63 classroom teachers in Ottawa, Canada, regarding inclusive education for students with hearing loss in the general education found that the teachers had favourable attitudes toward inclusion for students with hearing loss, had high self-efficacy in their ability to teach them. The same study reported that the teachers were knowledgeable about the effects of hearing loss on language and learning and claimed that their teacher education programmes had sufficiently prepared them to teach students with hearing the loss in inclusive settings.

In the US, children with a hearing loss, have access to a continuum of placement options such as residential and day schools for the deaf, a self-contained class on a public school campus and the majority students who are deaf or hard of hearing are included in the general education classroom (Roppolo, 2016; U.S. Department of Education, 2007). Gallaudet's Annual Survey of Deaf and Hard of Hearing Children and Youth in 2013 reported that approximately 51.1% of students with hearing loss receive their education in an inclusive setting with their hearing peers (Gallaudet University, 2013). A further nationwide study focusing on the services provided by itinerant teachers in the United States indicated that students who are deaf or hard of hearing "spend approximately 76% of the school day in the general education classroom" (Luckner & Ayantoye, 2013, p. 415). It is also argued that about 71% of students who are deaf or hard of hearing spend some time receiving direct instruction from itinerant teachers outside of the general education classroom (Luckner & Ayantoye, 2013).

It can be argued that the US operates on push-in and pull-out models. On the one hand, the push-in model is based on full inclusion practice where itinerant teachers provide service to the child who is deaf or hard of hearing in

the general education classroom but this is not without challenges. One of the critical challenges is the noisy environment within the general education classroom, which may sometimes be distracting to other students. On the other hand, the pull-out model is based on partial inclusion where students who are deaf or hard of hearing are sent to a separate resource room for services (Roppolo, 2016). It is to be noted that the service models students' access, in the long run, depends on the individual's social and academic needs (Rabinsky, 2013).

Although itinerant teachers with specialist knowledge in deaf education may provide services to students with a hearing loss in addition to services from other professionals such as speech pathologists, many students who are deaf or hard of hearing, are taught by a general education teacher in inclusive classrooms. A recent study in the US by Roppolo (2016), investigated 105 general education teachers' attitudes toward the inclusion of students who are deaf or hard of hearing by using an online survey throughout southeastern Mississippi. The results found that the general education teachers had an overall positive attitude toward the abilities and characteristics of deaf or hard of hearing children and their inclusion in the general education classroom, however, many of the teachers surveyed indicated their lack of adequate preparedness to teach students with hearing loss.

The European Agency for Special Needs and Inclusive Education reports that in the United Kingdom, the Education Act 2002 recognises the rights of all pupils with special education needs and made provision for them to have access to state-funded schools and participate in a broad and balanced National curriculum in all local authority schools (including special schools). In response, the National Curriculum is sufficiently flexible to accommodate

different learning dispositions and capabilities of students with disabilities including those who are deaf or hard of hearing. The introduction of the revised National Curriculum in September 2014 included a statement to reaffirm schools' responsibilities under equality legislation that mandates teachers to determine the support and teaching interventions their pupils need to participate fully in all parts of the school curriculum, including the National Curriculum (U.K. Department of Education, 2016). This requirement allows teachers and teaching staff the freedom in tailoring the National Curriculum to the specific needs of pupils by making reasonable adjustments and modifications that meet the requirement of the Equality Act 2010.

Although the law assumes that pupils with special educational needs will be educated in mainstream schools, provision is available in 'resourced' schools if their needs cannot be met in a mainstream school. In addition, some children with Education, Health and Care plans can be dually placed in both mainstream and special schools. Furthermore, there are situations where mainstream and special schools have been co-located to promote contact between the mainstream and special school sectors and to promote the inclusion of children with disabilities and those with SEN (European Agency for Special Needs and Inclusive Education, n.d).

These developments in inclusive education demonstrate the complexities of inclusive education, which are not peculiar to the highly industrialised nations. In developing countries, governments are struggling in the development of programmes to enhance inclusive education to a level that includes all students with disabilities, particularly those who deaf or hard of hearing full time in the general education classrooms (Kigotho, 2016; Oduyo, 2007). Some studies emerging from developing countries revealed several limitations regarding the

implementation of inclusion, the main being teacher knowledge and resource issues (Agbenyega & Klibthong, 2014, 2015; Aldabas, 2015; Kigotho, 2016). This assessment also includes Saudi Arabia (Alothman, 2014), therefore, a further study on full participation in inclusive elementary schools by deaf or hard of hearing students in Saudi Arabia would likely increase awareness where little is known about such practices as full participation and inclusive teaching.

2.1.3 Inclusive Education in Saudi Arabia

As the world is becoming more diverse, the need for inclusive education has reached a critical stage. Saudi Arabia ratified the UN convention in 2008 in an attempt to emulate inclusive education, worldwide; however, current practices do not guarantee the inclusion of all children (Ainscow, 2007). In the Saudi context, inclusive education is organised based on the type of disability and/or special education need. There are general education schools that provide inclusive education especially for blind students, while others focus on intellectual disability (Aldabas, 2015; Alothman, 2014). However, “deaf students’ education is a neglected area in Saudi Arabia” (Alothman, 2014, p. 37). As with many developing concepts in education, there are facilitators and hindrances to the successful implementation of inclusion in Saudi Arabia. Educational organisations may make their best attempts to effectively deliver inclusion for all students, yet it can be problematic due to the complex nature of inclusion and the barriers it holds. While Saudi Arabia has followed the global trend of inclusive education, few studies espouse the lived experiences of inclusion in Saudi Arabia schools (Dare, Nowicki, & Felimban, 2017). Gaad (2011) states that over the past decade, the Saudi government has implemented many strategies to meet the needs of children with disability (e.g.

limiting class sizes and providing training for teachers). In addition, the Ministry of Education supports the placement of children with disability in inclusive classrooms (Aldabas, 2015; Al-Mousa, 2010). These are positive steps towards achieving inclusion; however, they are not the only actions that need to be taken to ensure it is successful for all learners.

The move towards inclusive education led to the enactment of legislation and policies intended to support all students, particularly students with disabilities to benefit from regular school education. Key legislation included the Provisional Code for Persons with Disabilities (PCPD, 2000), the Regulations of Special Education Programmes and Institutes (RSEPI, 2001), and the Document of Rules and Regulations for Special Education Institutes and Programmes (2002) (Al-Mousa, 2010). These legislations provided the impetus for inclusive education to benefit a range of students with disabilities including visual impairment, deafness, hearing impairments, learning disabilities, intellectual disabilities and those with autism labels (Aldabas, 2015).

Despite Saudi Arabia's policy efforts, huge investments in resources and teacher training to enhance inclusive education, full participation of students who are deaf or hard of hearing remains as one of the most urgent problems (Aldabas, 2015 & Al-Mousa, 2010). Participation of students who are deaf or hard of hearing is hindered by access to inclusive schools, poor pedagogical practices and the quality of support where all students feel connected and belong to school (Al-Mousa, 2010 & Alquraini, 2011). Concerns about the participation of students who are deaf or hard of hearing in inclusive schools in Saudi Arabia connects to mainstream teachers' attitudes and lack of support from principals and parents (Allothman, 2014). Some teachers think that they do not have the requisite knowledge; therefore, students with disabilities would

better be served in special schools (Al-Mousa, 2010; Dare, Nowicki, & Felimban, 2017). One of the critical measures of inclusive education is students' experience of full participation (Voltz, Brazil & Ford, 2001). The most concerning problem, which is the lack of understanding how and what makes students who are deaf or hard of hearing connect themselves to school, and how their full participation is ensured have not been explored in Saudi Arabia. Currently, the General Secretariat of Special Education created a department called the Educational Advisory Unit (EAU), which provide several essential services to special and inclusive schools.

2.1.4 Deafness or Hearing Impairment

The definition and classification of students with hearing impairment and or deafness according to degrees of hearing impairment continue to expand (Hyde & Power, 2004; Timmer, Hickson, & Launer, 2015). Currently, definitions of hearing impairment have developed into a growing number of subdivisions (Neumann & Stephens, 2011; Timmer, Hickson, & Launer, 2015). Neumann and Stephens (2011) state there have been overlapping, unclear or absent definitions which have created confusion in service provision. More specifically, the severance between retro cochlear hearing disorders, central hearing disorders, central auditory processing disorders and auditory neuropathy is not always clear and can confuse physicians who specialise in associated fields (Marriage, Brown, & Austin, 2017; Neumann & Stephens, 2011).

Diversity exists within deafness and hearing impairment (Shakespeare, 1991). Anglin-Jaffe (2015, p.77) argues that it is “misleading to refer to deaf children as a unified group with common experiences, communication, preferences or shared identity.” Traditionally, deaf people's identity has been constructed around the disability-difference binary (Davis, 2002; (Shakespeare,

1991), for example, as a “disabled deaf person or as a Deaf person with a difference” (Davis, 2002, p. 9).

Studies pertaining to disability have examined the implications of culture in constructing disability, the lives of individuals with disabilities and how they should be educated (Shakespeare, 1991). According to Rosen (2018, p. 60), our social space serves as a “physical text of cultural constructions of the body that articulate personal, social and material functions and arrangements.” Thus, in their co-existence with the hearing world, deaf people have been constructed as disabled in terms of how society views their bodies in comparison to the majority of hearing people (Rosen, 2018). In educational terms, people who are deaf or hard of hearing are perceived as difficult to teach (Siple, 1994). This is because the capabilities of deaf people are judged on the basis of oral language which has led to high levels of social and educational exclusion in many societies (Rosen, 2018; Siple, 1994).

Cultural and social constructions of disability are based on the societal values and beliefs of hearing people (Frederickson & Cline, 2015). These normative values and beliefs are formed and reinforced through intergenerational practices (Siple, 1994). Language constitutes an essential component of culture and tradition, and offers ways people socialise in their culture. According Siple (1994), Deaf people have their own language forms, and sign languages are in no way dependent on oral speech systems. Thus, when society sees sign language as natural modes of communication then the lack of ability to communicate orally as ‘others’ cannot be used as a marker to exclude deaf people.

In the literature, ‘deaf’ with lower case and ‘Deaf’ with upper-case are commonly used. The use of ‘Deaf’ with upper-case refers to Deaf people who

identify as culturally deaf. It signifies an identity of belonging to a Deaf community. In this identity construction, Deaf people do not see themselves as disabled individuals but as a people with unique languages (Anglin-Jaffe, 2013a; 2015; McIlroy & Storbeck, 2011). On the other hand, 'deaf' with a lower-case is used to describe a medical condition of hearing loss and therefore, the individual is considered disabled when measured against institutional, cultural and social norms of hearing people (Myers & Fernandes, 2009; Shakespeare & Watson, 2002). In this medical conceptualisation, being deaf signifies a second-class identity with impairments that need to be 'fixed' before the individual can enjoy full participation in an oral-dominated society (Anglin-Jaffe, 2015; Davis, 2002).

It can be stressed that conceptualising people who are deaf or hard of hearing as defective, is a demonstration of the reproduction of structured inequalities and associated discriminatory attitudes and practices (Shakespeare, 1991). Berry (2017) argues that "when deafness is viewed as a disability, then deaf individuals are regarded as lacking a 'normal' attribute" (p. 135). In addition, perceiving deafness as a disabling condition and its resulting communication barrier (Kecman, 2019), may prevent the hearing majority from learning about the cultural patterns of the Deaf and, as a result, limit their full participation in inclusive education (Siple, 1994).

Therefore, in terms of inclusive education where disability is considered a part of human diversity, educators do not need specific diagnosis and classification to be able to respond to the needs of all children (Florian & Spratt, 2013) and families need clarity of definition as an essential component in delivering quality education to all students. Despite this need, the literature demonstrates though, that there is a lack of clarity in definitions (Marriage,

Brown, & Austin, 2017) and of any universal nature to guide service providers in every context (Neuman & Stephens 2011; Timmer, Hickson, & Launer, 2015).

Early identification (Korver et al., 2010) and effective management of hearing impairment optimise outcomes in children (Bat-Chava & Deignan, 2001; Marriage, Brown, & Austin, 2017). In addition to teachers' duty of care responsibility, parents also have responsibility of day-to-day care for children with hearing impairment hence, it is important for parents to be informed and supported regarding the technology and tools involved in assisting children to listen and speak when they are participating in inclusive programmes (Hung, & Paul, 2006). Marriage, Brown, and Austin (2017) state that hearing aids are fundamental to improving outcomes for hearing impaired children and the parents' role is vital in managing the technology of hearing aids. Brown et al. (2017) concluded that teachers and paraprofessionals must support parents have a solid understanding of how to use the tools that are necessary for their child with hearing impairment.

2.1.4.1 Models of disability

The medical and social models of disability are worth briefly mentioning in this literature review to provide the foundational knowledge to the theoretical framework of this study. The medical model of disability conceptualises deafness as a condition that needs to be cured to benefit the individual and society (Power, 2005; Retief & Letšosa, 2018). This idea is based on the modernist principles of normalisation that create binaries of normal versus abnormal. According Corker and Shakespeare (2002), a modernist's view of the world is "founded on assumptions about the unity of humanity, the individual as the creative force of society and history, the superiority of the West, the idea of science as truth and the belief in social progress" (p. 2). In this sense, oral

communication is regarded as the norm while sign language is seen as for those who have impairments located in their bodies and deafness as something that must be cured by a particular treatment.

In the medical model, students who are deaf or hard of hearing are perceived as defective (Anglin-Jaffe, 2013b). Medical model thinking reduces the complexity and focuses on medical prevention, cure or rehabilitation (Anglin-Jaffe, 2011; Shakespeare, 2006). Although a significant number of students who are deaf or hard of hearing benefit from hearing aids and cochlear implants, many do not make as good progress as others and still require specialised education programmes with some kind of signing to make progress (Spencer & Marschark, 2003).

On the other hand, the social model is concerned with how societal conceptualisations of disability, beliefs, structures and practices impose restrictions on individuals who are deaf or hard of hearing or fail to meet their educational and social needs (Oliver, 2009). The social model focuses on the removal of disabling conditions that impose restrictions on the individual (Oliver, 2009). In this way it is the moral responsibility of society to remove barriers to difference. The social model of deafness provides a conceptualisation of social and cultural interactions through which all people construct meaning in their lives (Anglin-Jaffe, 2011). Importantly, it is the values, beliefs, and behaviours in which we are socialised that shape our lives as opposed to a medical concept that perceives disability as self-inherent (Retief & Letšosa, 2018). In the social model, Deaf people are constructed 'as a linguistic and cultural minority community rather than a disability group who have their own form of communication (Myers & Fernandes, 2010).

2.1.4.2 Issues with deaf or hard of hearing students' participation

Al-Sharif (2012) reported that Saudi Arabia had 88,000 people who have been diagnosed with hearing loss in 2012 and out of this number 14,374 are students (boys and girls) of school age. The Ministry of Education in Saudi Arabia (2001) refers to students with deafness as those who have severe or profound hearing loss and use sign language for communication. General school/classrooms are described as educational settings, which are prepared only for students who do not need any special education or intervention. Research indicates that students labelled as deaf or hard of hearing may have a significant hearing loss, most individuals within this population have some level of hearing impairment and only a small proportion of the group is deaf (Martin, 2003). Hearing loss may be sensorineural (nerve-related), conductive (affecting the outer or middle ear) or a mixed hearing loss which is of both types (Martin, 2003). Students with hearing loss may be either pre-lingually deafened – have lost their hearing before they acquired language or post-lingually deafened - acquired their hearing loss after they acquired language (Bat-Chava & Deignan, 2001).

In Saudi Arabia, students who are deaf or hard of hearing are provided various educational options from residential schools to non-residential special institutes, and inclusive schools (Allothman, 2014). Residential institutes provide housing and educational facilities during the week including special health care, social, recreational and physical education services. In special institutes, day classes are organised in special schools where deaf students receive academic teaching and support in a day school and can use all facilities of residential institutes but without access to the boarding facility. Partial inclusion is provided where special classes or units of learning are organised for students in general

schools with adequate resources and certified experienced special education teachers to support the students. Students have access to free daily transport between their home and school. According to the Saudi Directorate General of Special Education (DGSE), 2013), there are 16 programmes serving students with hearing impairment in Riyadh, the capital city of Saudi Arabia including Resource Room Programmes with certified resource room teachers where students spend part of their school day in the general class with their hearing peers (Allothman, 2014).

In addition, students who are deaf or hard of hearing who benefit from full-time inclusion receive support from itinerant teachers and counsellors. The itinerant teachers and counsellors also provide in-service training and support to the general classroom teachers. Families, students and teachers also receive periodic support from specialist consultants who have extensive prior experience in educating students who are deaf or hard of hearing (Al-Musa, 2008; DGSE, 2013).

Despite improvements in teacher training and resources to support inclusive schools in Saudi Arabia, the majority of students who are deaf or hard of hearing are still experiencing challenges to full participation (Gaad, 2011). Allothman's (2014) study found that principals of inclusive schools did not have the requisite knowledge and understanding of inclusive education for effective education of students who are deaf or hard of hearing. The same research documented that the majority of teachers of deaf students had more knowledge and positive views towards inclusive education, worked hard to adapt resources and pedagogy to accommodate deaf students but were constrained by lack of support from principals (Allothman, 2014).

In addition, parents' lack of understanding about inclusion and its possibilities for their deaf students contributed to their lack of collaboration with inclusive schools to support their students (Allothman, 2014, Alquraini, 2011). Research in Saudi Arabia on the inclusive education of deaf students found barriers such as insufficient facilities and resources, lack of training courses and lack of collaboration among school staff and between staff and parents of deaf students (Al-Musa, 2010; Allothman, 2014; Al-Omari, 2009). These research findings imply that the current inclusive education system for students with deafness is partial participation in special units or classes within the general school with only some inclusive classes and activities (Al-Mousa, 2008; Al-Omari, 2009; Allothman, 2014). It seems that all policy and educational efforts have so far done too little to offer solutions to full participation in inclusive schools for students who are deaf or hard of hearing, thus necessitating further research in this area. These challenges are not peculiar to Saudi Arabia, studies in Sweden and the UK have identified instructional and resource challenges as impeding the successful implementation of full participation (Olsson, Dag, & Kullberg, 2018; Shaddock, 2006; Nunes, Pretzlik, & Olsson, 2001).

Maras and Brown's (2000) study on the participation of students who are deaf or hard of hearing in education found that negative attitudes were more evident in special schools toward these students than in regular schools. The participation of students who are deaf or hard of hearing in inclusive education generally involves intergroup contact (Bobzien, Richels, Raver, Hester, Browning, & Morin, 2013). However, Hung and Paul (2006) argued that previous research has failed to examine the impact of increased intergroup contact upon students with disabilities, and research tended to focus on the

attitudes of nondisabled students toward students who are deaf or hard of hearing. For this reason, these authors investigated how the degree of hearing students' attitudes toward inclusion of peers who are deaf or hard of hearing relates to the extent of their contact experiences (Hung & Paul, 2006). They found that students in inclusive classes demonstrated more positive attitudes than their counterparts in general education classes with no students with disabilities. This suggests that full participation is not possible if there are no efforts to help students who are deaf or hard of hearing to interact.

A plethora of studies found that simply placing children who are deaf or hard of hearing in regular classrooms does not constitute inclusion unless there are mechanisms in place to facilitate meaningful social interaction, peer acceptance, positive inclusion, and/or improvement in the children's social communication skills (Antia, Stinson, & Gaustad, 2002; Bobzien et al., 2013; Hyde & Power, 2004; Weisel, Most, & Efron, 2005). Bobzien et al. (2013) added that inclusive provision for students who are deaf or hard of hearing must create an environment where there are ample opportunities for meaningful interactions. According to research conducted by Nunes, Pretzlik, and Olsson (2001), hearing students often neglected their non-hearing peers in regular schools and rejected their friendship in school because of their behaviour and communicative patterns. Keating and Mirus's (2003) study of second and third-grade students with hearing impairment in an inclusive school setting found that although these students made several attempts at turn-taking and eye gazes, their initial attempts were often ignored by their hearing peers. Another piece of research by Punch and Hyde (2011) identified that despite some students who are deaf or hard of hearing have a good spoken language with the assistance of cochlear implants or hearing aids, they still have many difficulties in social

interaction, especially when in group situations and noisy environments. According to Dalton (2011), students with hearing impairments have emotional challenges, which affect their social interaction; however, educators' support improves their relationship with their peers.

A recent large-scale study by Olsson, Dag and Kullberg (2018) in Sweden in which 7865 students within the age range of 13-18 years participated, examined whether special or mainstream school contributed more favourably to the wellbeing, social and academic inclusion of deaf and hard of hearing students. The study also compared the adolescents from the two deaf and hard of hearing groups and their experiences of inclusion and exclusion in school and to ascertain if any gender differences existed between the two groups of deaf and hard of hearing students concerning their experiences of inclusion and exclusion. The results showed that both boys and girls in the hard of hearing groups rated their well-being lower and were less satisfied with their lives than pupils without disabilities. They also showed that the hard of hearing boys and girls attending special school were more satisfied with their lives and to a greater extent felt included both socially and academically than students in mainstream school. Some other studies identified more instances of proactive aggression, symptoms of psychopathy, attention deficit hyperactivity disorder, oppositional defiant disorder, and conduct disorder in students who are deaf or hard of hearing than their hearing peers (Martin & Bat-Chava, 2003; Theunissen, Rieffe, Kouwenberg, De Raeve & Soede, 2014).

These findings demonstrate the significant nature of barriers to the inclusion of students who are deaf or hard of hearing in communicating, initiating and interacting with social groups within an inclusive school, and maintaining interactions with hearing peers. Despite these barriers, some

studies indicate that children with cochlear implants experience positive social interactions in inclusive settings, especially in one-on-one situations (Bat-Chava & Deignan, 2001; Punch & Hyde, 2011). While these studies provide some insight into the challenges and possibilities of educating students who deaf or hard of hearing in inclusive schools, they do not focus exclusively on the concept and practice of full participation. In addition, parents' opinions were overlooked in most of these studies. The next section of the review discusses the concept of full participation in orchestrating inclusive education.

2.1.5 Conceptualising full participation in inclusive education

Although globally the number of children with disabilities in mainstream schools has increased over the years, educational settings are lacking full participation for children with disability in inclusive schools. Chang (2012) suggests that the demonstrated inclusionary practices in some countries are lacking true inclusion or participation for learners alongside typically developing peers. Some researchers have argued that the quality of inclusive schools is situated in the concept of full participation (Florian, 2009; Florian & Black-Hawkins, 2011; Spratt & Florian, 2014; Weiner, Day, Galvan, 2013). Full participation operates under the principles of transformability learning, equity, diversity, and inclusion (Spratt & Florian, 2014; Voltz, Brazil, & Ford, 2001). It is about supporting students to belong to a whole school community that interconnects with family engagement (Agbenyega, 2017). According to Sturm (2006, 2011), full participation is demonstrated through the ways students have access to all curriculum areas and actively engage in class, instead of sitting and listening to a teacher as the sole knowledge giver. Sturm (2011) reiterated that full participation ensures educational settings are inclusive and profoundly shape all students' ability to succeed and thrive. In this sense, the concept of

full participation enables the whole school community to identify students who are included or excluded and the mechanisms that promote their inclusion or exclusion.

In recent decades, many models of inclusion have been created in an attempt to ensure full participation for all children. For example, Beyond Access Model guides teachers' planning to support students' full participation in general educational pedagogical practices (Jorgeson & Lambert, 2012). The process in this and many other models aims to assure that students will not be isolated from mainstream education. Biklen (1985) refers to this as not being on an "island in the mainstream" (p.18). Instead, ideally, they are fully participating and becoming successful learners. Another important model of full participation is the 'engagement model'. Engagement focuses on– what the child wants to do, how they behave, and "what activities have high social, developmental or educational priority" for them (McConachie et al., 2006, p. 1163).

Further, a key component of ensuring full participation is a change in teacher attitudes about the students they teach (Kraska, & Boyle, 2014). This involves all teachers having high expectations of all students including those with disability (Jorgeson & Lambert, 2012; Kasa-Hendrickson, 2005). It is reiterated that students with disabilities' ability to connect to school and fully participate in educational programmes are dependent on the school culture (Jorgeson & Lambert, 2012). There are additional facilitators and barriers to full participation and these needs to be identified and acted on. Foreman and Arthur-Kelly (2014) found that the adoption of the notion of full participation addresses micro and macro-exclusionary education practices. Micro-exclusion or less than full participation occurs when students or members of the school community do not believe their school experiences have much bearing on their

future because they have limited access to curriculum areas, and they do not feel connected, that they belong or that they are accepted by their classmates or teachers (Foreman & Arthur-Kelly, 2014).

Full participation in inclusive education does not mean that every student will participate in the same activity; rather participation is tailored to each individual student's needs and interests (Forlin, Chambers, Loreman, Deppeler, & Sharma, 2013). Thus, the ideal goal of increasing participation in inclusive education according to research is not to have every student participate in the same way or at the same rate but to create a whole school environment in which all students have the opportunity to engage with education and learning from different perspectives (Chang, Anagnostopoulos, & Omae, 2011; Sturm, Eatman, Saltmarsh, & Bush, 2011). Teachers who understand the concept of full participation, move away from bell-curve thinking and use the concept of transformability to integrate active learning strategies into their teaching (Spratt & Florian, 2014). They consider ways of setting clear goals and expectations, provide ongoing support as well as design effective evaluation strategies to guide student progress (Forlin & Chambers, 2011; Forlin et al., 2013).

Full participation is an affirmative concept that drives members of the school community to always focus their activities on creating educational places where every student irrespective of their ability, disability, identity, cultural and economic background are able to thrive and realise their capabilities (Sturm et al., 2011). As full participation means a community, where everybody belongs, there is meaningful engagement in educational life as well as interactive nurturing of one another (Spratt & Florian, 2014; Sturm, 2010).

The research found that when school leaders and teachers place the concept of full participation at the centre of their practices they focus attention

on regularly transforming their institutional environment to support and enable students, teachers, and families to thrive (Agbenyega & Sharma, 2014). Transformation occurs through valuing and respecting each member of the school's community, enabling high levels of interaction with students with and without a disability, teachers, families and allied professionals (Ainscow, Dyson, Goldrick, & West, 2013). In this way, full participation is reciprocal and mutually beneficial (Dalton, 2011). Griffco (2014) discusses the need for government and society to be active on what needs to be done and to remove barriers to equality to be achieved. It is argued that the adoption and use of inclusive teaching can remove many pedagogical barriers to full participation of students with disabilities (Spratt & Florian, 2014). The next section of this review considers and discusses full participation in terms of inclusive teaching.

2.1.5.1 Full participation and inclusive teaching

The purpose of inclusive teaching is to enable full access to all curriculum areas. Research findings have demonstrated that full participation is facilitated through whole-school practice and in-class support (Mittler, 2012). At a whole school level, schools transform their institutional cultures from rigid to flexible practices, develop policies and support structures to enable access to all students' learning opportunities (Berlach & Chambers, 2011; Forlin et al., 2013). At an in-class level, full participation is linked to teachers' proficiency in differentiating curriculum, adopting universal design and use of information technologies and individual planning (IEP) support for students. According to UNESCO (2009) "... an 'inclusive' education system can only be created if ordinary schools become more inclusive – in other words, if they become better at educating all students in their communities" (p. 8). This means access and participation are enhanced when inclusive education is recognised as a basic

human right and the foundation for a more just and equal society (European Agency for Development in Special Needs Education, 2012).

Berlach and Chambers (2011) argue that availability of opportunity; acceptance of disability and or disadvantage; superior ability and diversity; and an absence of bias, prejudice, and inequality can lead to full participation. Shaddock's (2006) research suggests that a lack of time for students; difficulty in individualising within a group; inadequate training and resources; a lack of school support; and views that modifying lessons for some students compromise the learning of others can limit access and participation. When the focus is on disability rather than the potential of students this can reduce access and participation, leading to macro and micro exclusion (Foreman & Arthur-Kelly, 2014; Sturm, 2011; UNICEF, 2013). It is reiterated that:

when inclusion is seen as a disability issue and not as a whole-of-school issue, inclusive education becomes a code for 'special education' and as such can work against inclusive practice, with certain individuals and groups of students becoming pathologised in the eyes of educators" (Forlin et al., 2013, p. 9).

Grima-Farrell, Bain, and McDonagh (2011) state that "inclusive education represents a whole-school concern and works to align special education with general education in a manner that most effectively and efficiently imparts quality education to all students" (p. 118). Full participation focuses on identifying and removing barriers to participation in education (Ainscow, Dyson, Goldrick, & West, 2011; Mittler, 2012).

Mintz and Wyse (2015) argue that inclusive teaching, although offering a valuable critique of how we think about difference, also has the risk of downplaying the importance and possible benefits of scientific knowledge in the

area of children with disabilities. Inclusive teaching involves teachers' ability to teach all children and use their craft knowledge to maintain high levels of academic attainment in classrooms with diverse students (Florian & Black-Hawkins, 2011). The effective implementation of inclusive teaching focuses on extending what is typically available in the whole school community to every student irrespective of their learning needs in order to lessen the need to flag some learners as difficult to teach (Florian, 2009; Florian & Linklater, 2010; Nussbaum, 2011). This involves changing teacher attitudes toward students with disabilities and building equitable education systems (Ainscow, Dyson, Goldrick, & West, 2011; Kraska, & Boyle, 2014). Further, the approach is connected to the moral imperative to replace the notion of "most and some" learners to the idea of "everybody" (Florian & Linklater, 2010, p. 378). In doing this, inclusive teaching places all learners as unique individuals, each with distinct needs.

Some scholars, such as Alexander (2004) suggest that the origins of inclusive teaching should be located in the ways that teaching is connected with social structure, culture and agency. Florian and Black-Hawkins (2011) argue that inclusive teaching is becoming increasingly dominant in catering to differences in the classroom. Implementing this approach means that children's rights and their equality become central for all children in the classroom and the curriculum takes the needs of all learners into consideration and caters to them. Florian and Hawkins (2011) discuss how this approach allows all children to be viewed as equal, rather than some as having 'extra needs.'

In this sense, inclusive teaching within the notion of full participation is making all students flourish educationally by adopting teaching methods and strategies that meet individual students' learning needs (Mittler, 2012). Students

with diverse abilities cannot thrive without implementing inclusive teaching in schools. A strong philosophical argument supporting inclusive teaching is an approach for changing our perspectives from deterministic views of ability and students' cognitive development and replacing them with the concept of transformability (Florian & Spratt, 2013). The concept of transformability is a philosophy that focuses on creating new learning systems that promote every student's success when existing structures and teaching approaches seemed untenable. This requires from teachers to begin to think, know, feel and act as inclusive teachers and consider their to be role supporting and empowering every student to be included, fully participating and learning. Thus the focus is not on normal versus disability, rather on the notion of potential for learning framed in social justice, access, and equity where additional support is the key (Spratt & Florian, 2014).

Inclusive teaching encourages and enables full participation of diverse groups of students (Mittler, 2012). The challenges of advancing full participation through inclusive teaching may vary depending on the nature of the material and human resources, and supports available in the educational institution. Therefore, institutional and self-interrogation of the educational process must be ongoing and attentive to how each member of the school community is thriving (Sturm, 2006). This involves building the capacity and commitment of diverse members of the school community to support inclusive teaching and promote full participation.

2.1.5.2 Facilitators of full participation

First, effective professional practice is fundamental in creating inclusive environments (Wen, Elicker & McMullen, 2010). For full participation to be achieved, the environment must be an inclusive one. Professional practice is a

core component of facilitators of full participation, which is dependent on many factors. Some of these factors are collaboration with families, access to support, funding, policy, and teacher knowledge. Collaboration with families is essential to provide best practice and ensure participation for a child with a disability. This is also known as the parent-teacher relationship. Clarke, Sheridan, and Woods (2009) define this relationship as a child centred connection between individuals in the home and school who share responsibility for supporting the growth and development of children. It is argued that building rapport with parents will allow for a more cohesive and productive year from the beginning (Weasmer & Woods, 2010). If teachers gather information from parents regarding a child's strengths and abilities, it will highlight accomplishments and provide insights in relation to specific motivators for learning (Weasmer & Woods, 2010). A student having increased levels of motivation may lead to them more fully participating. Engaging a child with disability is not an individual task just for the teacher to take on, rather the support of other key persons, such as families, is crucial to be able to cater to children with disabilities effectively (Garbacz, McDowall, Schaughency, Sheridan, Welch, 2015; Weasmer & Woods, 2010). Recent studies have established that quality parent-teacher relationships can support children with disabilities' academic and behavioural outcomes (Garbacz, Sheridan, Koziol, Kwon, & Holmes, 2015; Minke, Sheridan, Kim, Ryoo, & Koziol, 2014). Thus, to ensure optimal participation of students with disabilities, the parent-teacher relationship should be facilitated and acted on accordingly.

Successful inclusive education cannot be implemented without the necessary support mechanisms. There are many avenues of support available to teachers who deliver inclusive practice (e.g., professional development, policy, support from experts in childhood disabilities, intervention support

services, funding, resources, and additional staff) (Zhang, 2011). Soukakou (2012) argues the importance of adequate support in order to achieve high-quality inclusive practice. For students to obtain maximum benefit from their education, these support systems must be utilised efficiently. Researchers have found that the lack of support for teachers (e.g. professional training and resources) is amongst the most cited reasons for educational institutions not providing successful inclusive education to all children (Allen & Cowdrey, 2015; Kemp, 2016; Zhang, 2011). Adequate skills, training of teachers, and supporting experts facilitate the full participation of students with disabilities (Kemp, 2016). In other words, although support is available, it must be tailored to the optimal benefit of individual students. An adequate support that considers differentiation is clearly vital to the provision of inclusive education, more specifically a critical component of delivering high-quality education to all students.

The facilitators of full participation in inclusive education include teachers' professional development. Effective and specific training in inclusive education that meets the learning needs of every child is essential (Agbenyega & Klibthong, 2015; Purdue, Gordon-Burns, Gunn, Madden, & Surtees, 2009). Professional learning helps teachers to better understand their roles and children's disabilities (Agbenyega & Klibthong, 2015). Teachers have a significant impact on the successful implementation of inclusive education and are required to take on new roles and responsibilities (Round, Subban & Sharma, 2016). Research findings indicate that, indepth theoretical and practical knowledge of inclusive education contribute to teachers' ability to effectively take on the tasks of teaching students with disabilities (Agbenyega & Klibthong, 2015; Shady, Luther, & Richman, 2013). Further, teachers need professional development to work effectively with the required people in a child

with disability's education (Carrington & Macarthur, 2012; Shady, Luther, & Richman, 2013). Fulfilling these requirements is challenging without skills and training in teaching children with disability. Communicating and partnering with key persons is essential to optimally meet the needs of a child (Brebner, Jovanic, Lawless, & Young, 2016; Weasmer & Woods, 2010). It would be beneficial for teachers to receive professional development to attain proficiency in collaborating with other stakeholders towards best practices in inclusive education. This type of training is necessary to improve and extend their understanding of inclusive education and the crucial role and responsibilities they hold.

2.1.5.3 Barriers to full participation

Global research revealed multiple barriers to successfully achieving full participation in inclusive education. The main issues identified were lack of support, because of inadequate funding (Banks, Frawley, & McCoy, 2015), poor teacher attitudes resulting in concerns associated with ascertaining the necessary training, and sourcing relevant resources and support to be able to effectively implement inclusive education (Berry, 2010; Buysee, Wesley, & Keyes, 1998; Horne & Timmons, 2009), lack of professional collaboration (Pretis, 2016), inadequate teacher knowledge and training to be able to successfully execute inclusive education (Agbenyega & Klibthong, 2015; Dyson & Gallannaugh, 2007), and components of students' physical, social and institutional environments (e.g. accessibility to school, noise levels, crowding) (Law, Petrenchik, King, & Hurley, 2007). These factors can pose significant barriers to children with disabilities. Removal of them is optimal, but not necessarily always easily achievable. Participation is fundamental to a child with disability's development. It is necessary to provide intervention via inclusion to

children with disabilities in order to assist them to develop and reach their full potential (Griffiths & Fazel, 2016).

Many research studies (Agbenyega & Klibthong, 2013; Ainscow, 2005; Berry, 2010; Buysse, Wesley, & Keyes, 1998; Kologon, 2014; Pretis, 2016; Purdue, 2009; Sherfinski, Weekley, & Mathew, 2015) have investigated the barriers to inclusive education. Some of the most significant issues include teacher knowledge, attitudes and professional practice, and lack of support (e.g. funding, additional staff, resources) to deliver an inclusive education which may lead to a better participation of students with disabilities. Specifically, teacher attitudes and values in relation to gaining new knowledge and implementing inclusive education were barriers to building new skills and knowledge (Agbenyega & Klibthong, 2013; Pretis, 2016). According to Ainscow (2005), the engagement of a child with disabilities in mainstream educational settings relies on teachers' understandings of inclusion. If they hold a negative attitude towards learning new knowledge, they will not develop a thorough understanding of inclusion, which may lead to less engaged children who are not reaching their full potential. Additionally, Buysse, Wesley and Keyes (1998), identified the significance of educators' attitudes and beliefs on inclusive education. They suggested that teachers develop resistance to inclusion when they are not adequately supported. This influences students' opportunities to fully participate in school, and prevents their chances to gain the maximum benefit from their education.

Another important area discovered in the literature in relation to inclusive education was utilising support services for children with disabilities. Buysse, Wesley and Keyes (1998) identified teachers having poor communication with families of children with disabilities, and inadequate support for teachers.

Chambers (2015) emphasised the need for adequate support staff in order to meet children's learning needs, while Weasmer and Woods (2010) claimed that lack of community support, places inclusive education in a vulnerable position. Teachers working collaboratively and obtaining sufficient support is crucial to delivering inclusive education. Key persons (e.g. Intervention support services) provide necessary support for teachers, children and families of children with disability, thus making it extremely challenging if teachers do not access critical avenues of support (Brebner, Jovanovic, Lawless, & Young, 2016; Matsushima, 2015; Weasmer & Woods, 2010). In summary, according to the research reviewed for this study, it would be very challenging for a teacher to successfully cater, and develop a child with a disability to their fullest potential without the support of key persons.

2.2 Section B: Theoretical Framework

Theoretical frameworks informing research on inclusive education could take a cognitive perspective (Astington, & Pelletier, 1996), a socio-critical perspective (Agbenyega, 2017), a behavioural perspective (Glanz & Bishop, 2010) or a social constructivist perspective (Vygotsky, 1987). The choice of a theory depends on the research aims and questions (Cresswell, 2012). The purpose of this study is to explore the facilitators and barriers to 'full participation' of male and female students who are deaf or hard of Hearing in Saudi inclusive elementary schools (6-12-year-olds). Barriers and facilitators of inclusive education are contingent upon the social practices in which the inclusive education takes place. To understand why the full participation of students who are deaf or hard of hearing in inclusive schools have challenges as described in the previous studies, it needs a theory that can illuminate social practices in which child development and learning take place.

The basic ontological assumption underlying this research is that the facilitators and barriers to the full participation of many students who are deaf or hard of hearing in inclusive schools in Saudi Arabia are not simply within the student factors; rather they are associated with how teachers, principals, and parents construct their perspectives about these students. Identifying such perspectives is a first step to improving the full participation of students who are deaf or hard of hearing. Students with disabilities face additional risks within their social and cultural environments due to negative attitudes and traditional cultural practices (Agbenyega, 2007; Voltz, Brazil, & Ford, 2001). Thus, this study is informed by the concepts of the cultural-historical theory in its conceptualisation, data collection, analysis and discussion to provide an insightful understanding of the ways in which Saudi elementary students who are deaf or hard of hearing are positioned, supported, included or excluded from full participation in inclusive schools. This section reviews and critically discusses key ideas embedded in the concepts selected from Lev Vygotsky's (1993) cultural-historical theory to unpack the facilitators and barriers to full participation.

The Russian psychologist Lev Semenovich Vygotsky was instrumental in the development of the cultural-historical theory (Bodrova & Leong, 2007; Vygotsky, 1978). On the one hand, the *cultural* in the cultural-historical theory refers to the distinct socially developed ways in which society organises their various social practices within which children are educated and nurtured into adults. On the other hand, the *historical* is used to explain how successive human generations interact with their environment through social practices, become skilled at their practices, used their environment to benefit them, and continue to do so (Smidt, 2009). In this way, the cultural-historical theory

acknowledges the interactivity between culture and history indicating, culture carries with its history. According to Smidt (2009), cultural practices that humans had developed over several generations enable us to examine the present, develop a better understanding of the past and make projections into the future.

The importance of using the cultural-historical theory for this thesis is that it emphasises the cultural and social nature of development. For example, the learning and development of students who are deaf or hard of hearing are located in the cultural and historical practices of the country in which their education take place. According to the cultural-historical theory children's psychological development occurs within social and cultural contexts, therefore, the development of children including those with disabilities cannot be separated from their social and cultural contexts (Davydov, 1995; Fleer, 2010). Children with or without disabilities are born into communities affected by existing intergenerational social and cultural practices, including knowledge and beliefs (Kozulin, 1998). Social practices imply human participation and contribution to social activities within a cultural setting and within these practices are enshrined physical and psychological tools or in other words, language and support systems that allow members of the community to work and thrive, share information, beliefs and ideas with others in traditional or formal education (Fleer, 2010).

While it is desired that every child acquires the tools and knowledge of its cultural community in order to interact with other members of their community, children with disabilities usually have difficulties developing to their fullest in traditional cultural communities due to negative perceptions (Agbenyega, 2007 Al-Musa, 2010; Alothman, 2014). It can be argued that as a child's

development cannot be separated from its social and cultural context due to the profound influence of beliefs, values and practices (Rogoff, 2003; Wertsch & Sohmer, 1995). Thus, barriers are often created for some children whom society constructs as disabled (Agbenyega & Klibthong, 2014).

In this theoretical framing, I focused on the concepts defectology, social interaction, culture and mediation, not in isolation of each other, but in an interactive fashion to explicate their unique roles in shaping our understanding of disability and the conduct of this study. As stated at the beginning of this theoretical framework, the cultural-historical theory incorporates many key ideas that provide an insight into the cultural nature of human life. Understanding the facilitators and barriers to full participation of students who are deaf or hard of hearing in inclusive schools cannot be possible without a strong theoretical positioning of this study.

2.2.1 Gaining insights into the theoretical framing of the study

Vygotsky theorised that the fundamental laws of development for children with disabilities and their non-disabled peers include interiorisation of external cultural activities into internal processes via psychological tools for example language, and mediated support by adults (Bottcher & Dammeyer, 2012; Smagorinsky, 2012). It is argued that human mental development (both for children with and without disabilities) is a socio-genetic process that occurs within social activities when children interact with adults (Smagorinsky, 2012). Education is fundamental in this process as it leads development. Language and signs, and support systems act as tools within educational practices to mediate the development process (Bodrova & Leong, 2007; Daniels, 2001; Kravtsov & Kravtsova, 2011; Smidt, 2009). The next section discusses the concept of mediation as it relates to this study.

2.2.2 Mediation and full participation

Lantolf (2001) argues that an important consideration in Vygotsky's theory is that the mind is mediated. On the one hand, a basic understanding of mediation describes it as "a situation where one entity plays an intermediary causal role in the relation between two other entities" (Fernyhough, 2008, p. 230). For Chesnokova (2004), mediation in cultural-historical theory refers to the process whereby individuals' understanding is altered through the experience of others. This conception of mediation is limited if compared to Fernyhough (2008) conception of mediation as involving "the use of culturally-derived psychological tools, such as utterances in spoken or sign language, in transforming the relations between psychological inputs and outputs" (p. 230). According to Kozulin (1998), three kinds of mediators can be identified in Vygotsky's theorisation such as material tools, psychological tools and other human beings. In Kozulin's view material tools "presuppose collective use, interpersonal communication, and symbolic representation" (ibid p. 62). In this sense, human activity is conceptualised as a dialectical interaction between the subject and the object with the support of a mediating artefact or psychological tool interposed between the subject and the object (Fernyhough, 2008). In this sense, mediation is central to full participation in any given curriculum or learning experience.

Full participation of students with disabilities in inclusive classrooms can be conceptualised as an educational practice that consists of students and learning objects mediated by tools and humans such as teachers, parents and other students. A mediating practice can facilitate full participation in inclusive education as it allows an individual to create new relations between the stimulus and the response in a learning situation (Vygotsky, 1997).

For example, children who are deaf or hard of hearing (subject) may engage with teachers, parents, other students and adaptive resources as mediating tools to help them develop a better understanding of their learning and make progress. Another example is the use of technological resources by teachers to support deaf students to thrive in inclusive classrooms. In this case, the teachers are the subject, the mediating artefact is the technological resources and the adapted classroom or curriculum is the object. This explains the varied nature of mediation tools including material resources, mental tools such as ways of thinking and language and collective social practices such as culture (Vygotsky, 1997). In the next section that follows, the idea of defectology is discussed and how a shift in thinking from this perspective can serve to facilitate the development of opportunity for full participation in inclusive education.

2.2.3 The idea of defectology and full participation

One of the purposes of this study is to identify current barriers to full participation of students who are deaf or hard of hearing in elementary schools in Saudi Arabia. Vygotsky's general theory discusses in detail the notion of the social nature of the physical and mental disability. He explains issues of primary defects and secondary defects and their interactions. The term "defect" is problematic in the sense that it conceptualises the person with a disability as a blemish and deficient. Although this term had been conceptualised to describe disabled persons in pejorative terms, its manifestation is still prevalent in many societies (Agbenyega, 2007; Agbenyega & Klibthong, 2014; Bottcher & Dammeyer, 2012; Smagorinsky, 2012). A primary defect focuses on and describes an organic impairment due to biological factors while a secondary

defect refers to limitations of higher psychological functions because of social factors (Bottcher & Dammeyer, 2012; Smagorinsky, 2012).

In this conceptualisation, an organic impairment in the hearing mechanism of an individual who is deaf or hard of hearing prevents him/her from learning in the conventional form like other students. However, it can be argued that it is the society that is responsible for inhibiting the deaf student from mastering their learning or social skills. For example, if society modifies the learning environment and provides appropriate resources and teaching methodologies, the secondary disability can be avoided. Many so-called inclusive schools do not have support systems that enable deaf or hard of hearing students to fully participate in all curriculum areas. Vygotsky (1993) wrote:

A defect creates certain difficulties for physical development and completely different ones for cultural development. Therefore, the two lines of development will diverge substantially from one another. The degree and character of the divergence will be determined and measured in each case by the different qualitative and quantitative effects of the defect on each of the two lines (p. 43, original italics).

Analysing from a Vygotskian point of view exclusion from full participation in inclusive schools is not primarily due to the student's disability, rather, it is due to social practice implications. In societies where disability is perceived as a defect for example, where teachers consider deaf students as objects to be manipulated, educational practices can lead to exclusion from participation. In order to enable full participation, Vygotsky expressed that, it is necessary to avoid focusing too much on the disability itself but to think about the learning environment (Vygotsky, 1993). According to Bottcher and Dammeyer (2012),

even though the disability arises from one or more biological defects, it is at all times necessary to study disability as a phenomenon that has

emerged within specific physical, social and cultural-historical contexts (p. 346).

Vygotsky posits that mental processes can only be understood using cultural and psychological tools in the context of community (Moore & Skinner, 2010). This indicates that the participants' perspectives can be understood according to the attitudes, beliefs, and values of their cultural communities (Skinner & Weisner, 2007). The cultural-historical theory provides a framework that reveals the meanings people ascribe to disability. A Cultural-historical conception of inclusion argues against focusing on the disability, such as a hearing impairment, and seeks to examine the social and physical conditions surrounding the student's learning and development (Bottcher, 2010). In Vygotsky's (1993) view, disability is a social construct. His view of the concept of defectology means that how we come to name disability and internalise it originates from our social, cultural, and historical practices (Agbenyega, 2007; Vygotsky, 1993).

Traditionally, people focus on disability as a property of the student, thus locating the cause of the disability within the student (Agbenyega & Klibthong, 2014). Blaming the student for his or her disability means that the student is seen as a problem that must be remedied through excessive medical intervention before the student can be included in schools. This within the student conceptualisation is challenged by Vygotsky who argued for example, that "Blindness is not a disease but the normal condition of a ... student [with visual impairment]; he [sic] senses his uniqueness only indirectly and secondarily as a result of his social experience" (Vygotsky, 1993, p. 81).

What Vygotsky (1993) is suggesting here is that students with additional needs, for example, in inclusive learning contexts should be considered no

more than “the absence of one of the means of forming conditional ties with the environment” (p. 79). Deaf or hard of hearing, reduce only one form of sensory connectivity to environmental stimulus. However, the environmental stimulus can be modified to enable the deaf student to connect to the stimulus. Thus, it can be argued that barriers produced through the social, cultural, educational, and environmental conditions in which the student operates to allow other developmental trajectories to organically emerge (Bottcher & Dammeyer, 2012; Fleeer, 2016; Smagorinsky, 2012). Consequently, deafness or hard of hearing does not have to impede the student’s overall development. An effective inclusive practice thus provides the means of full participation in learning for all students, including those who are deaf and hard of hearing. This is not accomplished as compensation but rather as a fundamental transformation of education that is based on the right to full participation. Research into full participation and inclusive teaching for students who are deaf and hard of hearing should take into account the factors and cultural practices of the social world, and reject the myth of students as incapable of learning with their nondisabled peers (Agbenyega, 2007; Cologon, 2013, Forlin et al., 2013).

A cultural-historical understanding of inclusion also draws upon pedagogical theories that suggest deaf and hard of hearing “by itself does not make a student handicapped; it is not a defective condition, an inadequacy, abnormality, or illness...[hard of hearing] becomes these things only under certain social conditions of a...person’s existence” (Vygotsky, 1993, p. 84). In conceptualising disability as a social phenomenon, the way is paved to focus on the “student’s social milieu, not the organic impairment per se” (Gindis, 1995, p. 79). Gindis (1995) referring to Vygotsky (1983) noted that by purely focusing on the biology of the student we see deficiencies leading to practices based on a

deficit model. Vygotsky (1983) argued that “training of sharpness of hearing in a...person has natural limitations; compensation through the mightiness of the mind has virtually no limits” (as cited in Gindis, 1995). Thus, Vygotsky’s contribution to inclusion is seen in the ways culture, history, and social practices interact to shape what happens in inclusive classrooms and how we view students with disabilities in general (Bottcher & Dammeyer 2010; Vygotsky, 1993).

A cultural-historical model of inclusion presents a positive and strength-based approach to supporting learning and development (Bottcher, 2012; Mendez, Lacasa, & Matusov, 2008). Bottcher (2012) suggests that traditionally when students with disabilities are separated from an activity on the basis of their disability, such practices are at odds with how to get the students to participate inclusively because the student is viewed as an object. This means a student with a hearing loss should not be seen as a cultural object to be manipulated, but rather as an individual with rights to communicate, act, and participate fully and equally in programmes of his or her choice. Exclusion from participation, as Bottcher (2010) argues, occurs from in inclusive classrooms when there is a lack of congruence between the student and the social practices surrounding them and their developmental trajectory. Dammeyer (2010) reiterates that congruence between the student’s strengths and the programme’s practices creates a platform for full participation. The cultural-historical theory thus calls for a network (including teachers and the student’s parents) to work together to meet the needs of students in inclusive settings (Bottcher, 2012). This would reduce fragmentation of services to students who are deaf and hard of hearing (Underwood, Valeo, & Wood, 2012).

The focus of supporting the students with disabilities learn and develop their full potential should be the intensification of cultural education and modification, strengthening of the higher psychological functions, the quantity and quality of communication, and social relationship (Bottcher & Dammeyer 2010). The main goal of inclusive education and full participation is to enabled access, and provide support to all students so that their disability does not become a barrier to their development of higher psychological functions. This necessitates a pedagogical innovation such as inclusive teaching as discussed in the first section of the literature review. According to Vygotsky (1993), educators need to use a strength-based approach rather than traditional approaches in evaluating individuals with disabilities. This means avoiding too much emphasis on negative characteristics and use approaches that provide independence and needs for targeted support (Cologon, 2014).

2.2.4 Culture and full participation in inclusive programmes

Theorising inclusive education from Vygotsky's cultural-historical theory invites researchers to consider learning and cognition as culturally and socially mediated experiences, which is situated within a historical context (Fleer, 2016; Kozulin, 1998; Wertsch & Sohmer, 1995). According to Kravtsova & Kravtsova (2009), children's learning and development benefit from the entire social and cultural environment that has been indirectly and directly influenced by cultural practices (Bottcher & Dammeyer 2010). For example, an individual with a disability interacts with, the social structures such as school community members, family and the wider society as well as the language and value systems to construct their own development. In this way, the efforts of an individual with a disability are not disconnected from the types of practices that they exposed to or engage in schools and families (Rogoff, 2003). This

suggests the interconnectedness of the cultural and natural lines of development to shape the overall future prospects an individual (Vygotsky, 1993). The cultural line can be explained as the cultural context in which individuals with and without disabilities learn and develop and the natural is conceptualised as the biological or natural aspects of the individual child (Bottcher & Dammeyer 2010). This study also considers parents' perspectives about their children's full participation in inclusive programmes. This consideration is related to Vygotsky's (1993) idea that although children are physically separated from their mother, biologically, however, they need their mothers' support to obtain the basic needs of life. Thus from infancy, all children's existence occurs within a particular culture where they interact with adults to develop social relationships (Daniels, 2001 & Smidt, 2009).

Indeed, the nature of cultural practices has far-reaching implications for children. Vygotsky (1993) claimed that "the social aspect formerly diagnosed as secondary and derivative, in fact, turns out to be primary and major. One must boldly look at this problem as a social problem" (p. 112). For example, negative cultural attitudes toward children with disabilities can become a major barrier to their inclusivity or full participation in inclusive schools (Smagorinsky, 2012). Similarly, positive cultural practices that value children with disabilities can serve to facilitate their full inclusion in society and educational programmes (Cologon, 2014). Children's development is also facilitated through interaction with their peers in their respective cultural-historical contexts. This interaction brings together the interplay of the natural and cultural lines of development to promote learning and development. In this sense, the attitudes held by peers about disability may contribute to the shaping of the sociobiological attributes of the individual child's with disability personality and vice versa (Vygotsky,

1993). This historical conditioning (Vygotsky, 1993) of individuals necessitates a deeper analysis of the social and cultural practices related to disability.

The analytical of this study is that the cultural context of Saudi Arabia in which this study is conducted plays a significant role in shaping how students who are deaf or hard of hearing access inclusive education and experience full participation. The concept of culture is critically relevant when theorising, analysing and interpreting the concept, practice and experience of full participation Saudi elementary students who are deaf or hard of hearing. The concept of culture provides a framework and theoretical tool to examine teachers', parents', and students' views and related practices of full participation in inclusive programmes as well as the concept of inclusive teaching. The examination of the social and cultural constructs related to the notion of disability (deaf or hard of hearing) and full participation in inclusive programmes informed the present conceptualisations and the ways full participation is approached by inclusive schools in each school context. The concept of the social and cultural construct also assisted in developing greater insight into how teachers use mediated resources to support students who are deaf or hard of hearing experience full participation in learning programmes with respect to inclusive education as outlined by Saudi disability and inclusive education policies.

2.2.5 Social interaction and full participation in inclusive programmes

Another important concept from Vygotsky's theory, which is relevant to this study, is social interaction. Vygotsky (1978) posits that cultural value acquisition is a significant part of the psychological development of an individual. Smidt (2009) explains that individuals become aware of themselves, their roles, their values in terms of their cultural context in which they are nurtured. It is argued

that the acquisition of values, norms, practices and ways of thinking do not occur in a vacuum but through social interaction within the cultural context that the child is raised (Danby, 2009).

In Vygotsky's (1978) view, every function in a child's cultural development appears twice, initially on the social plane, then on an individual level (Bodrova & Leong, 2007; Fler, 2010). Social interaction involves interaction between a child and the adult who is more competent to guide the child, which is termed interpsychological. This interaction builds the child's knowledge repertoire so that they can engage with and make sense of their world, which is termed intrapsychological. Children's transition between the interpsychological modes to the intrapsychological involves internalisation of knowledge and cultural practices. Vygotsky (1978) explained this as the internal reconstruction of an external activity (Bodrova & Leong, 2007). Ironically, it is through social interaction with peers and adults that children learn with, from and about each other as well as internalise their cultural modes of doing things in their community. Social interaction also helps children to develop and acquire the beliefs, values, and norms of their cultural communities (Bodrova & Leong, 2007).

The implications of the concept of social interaction have powerful implications for this study. On the one hand, positive interactions between students who are deaf or hard of hearing and teachers, parents and other students within an inclusive school community can provide an avenue that allows children to be fully included and participate to attain the ways of thinking and learning outcomes that reflect that inclusive school community's culture. On the other hand, unwelcoming social interactions can lead to exclusion from full participation. Danby's (2009) argues that within the cultural-historical theory,

social interaction enables members of a cultural community to make use of the tools of their community culture to benefit all. An inclusive school is a community with its own unique inclusive culture. With respect to this thesis, the concept of social interaction is helpful for examining the ways in which full participation is enacted through social interaction between deaf students and non-deaf students, parents and teachers in the inclusive classroom. The concept of social interaction explains how interaction with parents, teachers and peer helps deaf or hard of hearing students connect with their inclusive schools and develop ways of fully participating in their inclusive school's cultural community. The concept of social interaction further provided insight into the analysis of classroom practices and the types of interactions that it promotes between the deaf students and teachers as well as other students without disabilities. For example, Bottcher and Dammeyer (2012) argue that "the often problematic development of children with disabilities is the result of an incongruence between, on the one hand, the biological and physical development of the child and on the other, the structure of cultural forms in which the child is living" (p. 435). It is argued that usually, a child with a disability has difficulty accessing school programmes or finds it difficult to participate in learning activities without support due to the ways schools are organised (Bottcher & Dammeyer, 2012; Vygotsky, 1993). Thus the notion of social interaction also helps in analysing parents' perspectives with regard to the support they provide to their children to facilitate their full participation in inclusive programmes.

The theoretical framing of this study illustrates that Vygotsky's cultural-historical approach introduced dialectic approach, that is, an interactional approach as discussed by Shakespeare (2006) to inform research on disability

and inclusive issues. Arguing from this dialectical point of view, the focus is on not only the disability but on the social and cultural factors that serve as barriers to students with a disability to learn cultural tools (Thomas, 2004). This view provides the lens to interrogate and analyse social barriers to full participation (Bottcher & Dammeyer, 2010; Thomas, 2004). In addition, the dialectical approach contributes to our understanding of the variabilities students with the same types of disabilities and how best to confront social and cultural barriers to inclusion and full participation.

2.3 Summary of the Chapter

This chapter has reviewed the empirical and theoretical literature. The chapter, which was divided into two sections, discussed some critical issues related to the concept of full participation, inclusive teaching, facilitators and barriers to full participation and issues of deaf education. The literature identified that the philosophy of full participation is new in Saudi Arabia, and cultural and religious practices still serve as critical barriers to inclusive education. While there are policies to support the education of students with disabilities in Saudi Arabia, available literature pointed out that the majority of students who are deaf or hard of hearing are educated in segregated special institutions with partial inclusion and pull-out resource rooms the major educational practices. The second part of the review discussed and justified why the cultural-historical theory is selected for this study. It explained the concepts of defectology, culture and social interaction as the main concepts driving the study. The next chapter details the methodology and the research strategies employed to collect and analyse data for this study.

Chapter Three: Methodology

3.1 Introduction

The literature review and the theoretical framework sections of this thesis provided breadth and depth of information to ground this study. The literature on Saudi Arabian education system indicate that inclusive education continues to be highly prioritised, however, the concept and practice of full participation in inclusive schools are at an embryonic stage (Allothman, 2014). The purpose of this chapter is to describe the philosophical and methodological approaches, data collection and analyses methods including fieldwork related issues during the data collection process. First, details of the research methodology and design are presented. This is followed by participant selection, description of data collection tools and data collection, and how data were analysed. Information is also given on ethical procedures and reliability and validity issues.

3.2 The nature of the study

As indicated in Chapter One, this study aimed to explore the perspectives of teachers, parents and students regarding the current state of full participation of elementary students (6-12 years) who are deaf or hard of hearing in inclusive schools. It aims to gain insights into the nature of the facilitators and barriers to full participation, analysed through inclusive teaching concepts and practices, and Vygotsky's cultural-historical theory.

According to methodological specialists, the aims of research questions influence the choice of a particular paradigm (s) and methodology (Creswell, Klassen, Plano Clark, & Smith, 2011; Guba & Lincoln, 2005). Despite several research paradigms and methodologies are available for use in educational

research, in this research, my methodology is grounded in the pragmatism paradigm (Guba & Lincoln, 2005; Hallebone & Priest, 2009; Nudzor, 2009; Wahyuni, 2012). By grounding my study ontologically in the pragmatic paradigm indicates that the study is not a pure positivist's research that situated me as external and independent knower of what the participants shared with me during the data collection process (Creswell et al., 2011). It is argued that being a pure positivist indicates a believe that "it is possible to develop knowledge systems which avoided theology, speculation, and metaphysics, and which rely exclusively on what can be observed" (Brown & Baker, 2007, p. 34). If I were to apply the positive notion, this would suggest that my understandings can lead to interpretations of reality or what is known through data collected as objective and fixed (Howe, 2009; Neuman, 2011). Detailed explanation of the pragmatism paradigm and how I used it in this study are discussed in a subsequent section of this chapter.

Another methodological paradigm that has elements intersecting with the pragmatic paradigm is interpretivism. The interpretive epistemology perceives reality as socially constructed and that knowledge is not static but change over time when individuals interact with different social contexts and situations (Nadzor, 2009; Wahyuni, 2012). The affordances of the interpretive way of knowing enabled me to explore and search for "culturally and historically situated interpretations" full participation in inclusive elementary schools in Saudi Arabia (Crotty, 1998, p 67). This is consistent with what Guba and Lincoln (2005) argued that, what constitutes acceptable knowledge in social research, epistemologically, depends upon the research questions.

In reference to my research question in the introduction section of this chapter, there was a need for obtaining data on attitudes and factors supporting

or inhibiting full participation, which I gathered through surveys. There was also a need to obtain and analyse feelings and perspectives for a deeper understanding of full participation, which I obtained through interviews. This study, was, therefore, situated in a pragmatic methodological paradigm or pragmatism as this approach allowed for the collection of numerical and narrative data (Creswell, Klassen, Plano Clark, & Smith, 2011; Wahyuni, 2012).

3.3 The pragmatic paradigm and justification for its use in this study

The ways researchers apply the term paradigm has varied considerably. Initially, the Kuhnian perspective sees paradigm as “a way to summarize researchers’ beliefs about their efforts to create knowledge” (Morgan, 2007, p. 50). In Biesta’s (2010) view, paradigms are part of the useful tools that researchers use for finding out about a problem. As research tools, paradigms help me to situate the research process on sound methodological theories that help me to conduct appropriate research (Freshwater & Cahill, 2013; Morgan, 2007).

In this study, I selected the pragmatic research paradigm to examine the perspectives of teachers, students and parents regarding the problem of full participation of students who are deaf or hard of hearing in inclusive school programmes. According to Biesta and Barbules (2004), pragmatism is a deconstructive paradigm as it aims to understand assumptions about certainty, identity, and truth and the multi-layered meanings produced in research data. The pragmatic paradigm advocates for the use of mixed methods in research that, “sidesteps the contentious issues of truth and reality” (Feilzer, 2010, p. 8). The deconstructive nature of the pragmatic research paradigm is characterized by an emphasis on communication and shared meaning-making

where knowledge creation is in constant renegotiation, debate and interpretation in the light of its usefulness of the social problem being investigated (Biesta, 2010; Tashakkori & Teddlie, 2003; Maxcy, 2003). In this way, the primary emphasis was on the research questions that were developed to guide this study. Tashakkori and Teddlie (2003) reiterated that the pragmatic paradigm “focuses instead on 'what works' as the truth regarding the research questions under investigation” (p. 713). These explanations illustrate that research informed by the pragmatic paradigm can be both contextual and generalisable to other similar situations.

From this perspective, as a pragmatic researcher, I adopted a reflective stance during the data collection, analyses and presentation of findings to minimise my personal biases (Morgan, 2007). Pragmatism as a methodological paradigm was suited to this research as it focused on attitudes, practices, and feelings as well as allowed for the collection of both quantitative and qualitative data for integration.

Traditionally, blending quantitative and qualitative approaches in a single research have been criticised as incompatible (Howe, 1988, 2003) because the assumption is that they come from different philosophical traditions (Creswell, Klassen, Plano Clark, & Smith, 2011; Howe, 1985). For example, qualitative research is criticised as too subjective to be accepted as science (Howe, 1985). Many research methodologists have argued that there are personal values in any type of research whether -positivist or interpretive in tradition (Creswell, Klassen, Plano Clark, & Smith, 2011; Howe, 2009; Nudzor, 2009; Wahyuni, 2012), and these values play significant roles in the ways researchers interpret their results (Howe, 2009).

Nudzor (2009) argues that if we think of positivism as the tenable methodology, we may be isolating the empirical content of educational research from its humanly contributed conceptual content. Howe (2009) reiterates that this is a pragmatic issue that needs to be addressed if researchers intend to capture the holistic nature of a research issue. As pragmatic research can either be conducted quantitatively, qualitatively or both, the blending of both approaches can help illuminate the important elements of full participation of students who are deaf or hard of hearing, identify potentially hidden voices, and provide complementary sources of evidence for deeper insights through the use of questionnaire and interviews.

3.4 Research method and design

Research is becoming increasingly interdisciplinary in the social sciences, complex, and dynamic at the same time. In view of this, combined research techniques are becoming popular and important in studying complex problems such as full participation in inclusive education programmes (Johnson, et al., 2007). The complexity of the notion of full participation is embedded in human beliefs, attitudes and practices. According to Onwuogbuzie and Leech (2007) research questions, “in large part, dictate the type of research method and design to be used, the sample size and sampling scheme employed, and the type of instruments administered as well as the data analysis techniques (i.e., statistical or qualitative) used” (p. 475). Teddlie and Tashakkori (2009), conceptualise mixed methods as the third paradigm, while to Greene (2007), indicates it is the varying ways of seeing and hearing or the collection of words and numbers through qualitative and quantitative means (Johnson & Christensen, 2008; Johnson, Onwuegbuzie, & Turner, 2007).

The research questions of this study required elements of both qualitative and quantitative data for the purposes of integration, in-depth understanding and corroboration of the research problem (Bazeley, 2009; Creswell, 2012). This is consistent with Creswell and Plano Clark's (2007) position that the integration of qualitative and quantitative research designs can create a holistic picture of the phenomenon being studied. However, there is still disagreement regarding how best to use mixed methods (Creswell & Clark, 2017, Clark & Creswell, 2010). The main argument in mixed methods design is whether it helps in the synthesis of multiple interpretations of a problem (Denscombe, 2008; Teddlie & Tashakkori, 2009).

It is argued that a careful design of a study promotes the quality of data collected (Teddlie & Tashakkori, 2009). This study was designed as an explanatory quantitative - qualitative (Quan-qual) mixed method. This design type is also known as the sequential explanatory mixed methods design. With this design type, quantitative data was collected first, followed by qualitative data for the purpose of integration to explain and extend insights into the study problem (Teddlie & Johnson 2009). In this way, the mixed method was useful, affording me the strength that compensated for the limitations of looking at a cultural-historical issue from only a quantitative point of view (Creswell, 2008).

Another important aspect of this mixed method design was that the participants' voices were heard in addition to the numerical data (Onwuegbuzie & Leech, 2007; Teddlie & Johnson, 2009). This helped to illuminate some of the cultural issues around full participation in inclusive schools in Saudi Arabia. The qualitative interviews, for example, enhanced communication, promoted collaboration, and supported a comprehensive understanding of how one problem was related to another (Johnson, et al., 2007), where what constituted

barriers or facilitators to inclusive education have been examined. Again, the qualitative component allowed for follow-up interviews enabling access to participants' perspectives and teachers' instructional practices to complement the quantitative data.

3.5 Data integration in this study

Mixed methods research designs vary by the level of prioritisation of one form of data over the other. The variations may be associated by the order in which the data is collected and analysed, the timing of data collection, such as whether the quantitative and qualitative phases take place concurrently or sequentially, and how data is weighted (Driscoll, Appiah-Yeboah, Salib, & Douglas, 2007). This study is a sequential explanatory mixed methods design consisting of two distinct phases (Creswell, 2008). I applied these methods in my study because a need exists to use initial survey findings in order to develop further interview questions and collect narrative data to enrich the survey findings with the interview findings so that I can understand the interconnected and/or distinct aspects of the research objectives and questions (Creswell, 2008; Teddlie & Johnson, 2009).

The use of an explanatory mixed method design allowed me to collect and integrate data sequentially by collecting initial quantitative data in the first phase followed by a qualitative data collection in the second phase. The purpose was to provide more data about results from the earlier quantitative phase of data collection and analysis to guide participant selection for the qualitative phase who can best provide rich data to verify and augment results from the qualitative data (Creswell & Clark, 2017). In this study, the statistical analysis determined which findings to augment in the next phase of the study and how the qualitative

data were coded, analysed and themes extracted to supplement and explain the complex and contradictory and surprising survey responses.

3.6 Participant selection and justification

Traditionally, random sampling schemes have been associated with the positivist paradigm, whereas non-random sampling schemes often use the interpretive paradigm. Onwuegbuzie and Leech (2005) argued that this is a false demarcation because both random and non-random sampling can be used in quantitative and qualitative studies (Onwuegbuzie, & Collins, 2007). In identifying a sampling scheme for this study, it was important to identify where the participants originated to provide depth of knowledge on the phenomenon under examination. The goal was not about obtaining data to represent completely, the inclusive school system in Saudi Arabia. The focus was on two main contexts, Riyadh, the capital city and Jazan in the southwest of Saudi Arabia. These are big cities and data captured from these contexts provided a snapshot of issues regarding full participation of students who are deaf or hard of hearing in inclusive primary schools.

The participant selection was based on the pragmatic paradigm with the goal to generate data that is meaningful to support students who are deaf or hard of hearing to fully participate in inclusive education programmes. The goal was to look for insider perspectives in order to understand values and ideas that shape the participants' experiences with regards to students who are deaf or hard of hearing in the nominated inclusive school contexts. Given these purposes, the sampling schemes were based on two main assumptions. Firstly, to collect data that is contextually relevant (Rubinstein, 1990) as contextual data is critically important for an indepth understanding of the rich experiences and perspectives of participants and how their experiences resonate with other

similar contextual, cultural and school factors (Luborsky & Rubinstein, 1995; Scheer & Luborsky, 1991). Second, to select information-rich participants so that relevant data pertaining to the research questions can be collected for analysis to answer the research questions. These formed the basic questions concerning who to include in the research to assure that the findings have the explanatory power to contribute useful information.

As the intention was to obtain comprehensive data to explain the understandings and practices of full participation, a three-level data collection was used to guide the participant selection process. Creswell et al. (2011) note that selecting participants for a study should be based on the purpose of the study and the outcomes that the researcher expects. Random sampling and non-random sampling methods are often used to select samples for a study. In this research, I used purposive sampling technique to identify the target schools and population of the study. The target schools were inclusive elementary schools in Riyadh and Jazan in Saudi Arabia at the time, and the population referred to all the teachers who were teaching students who are deaf or hard of hearing in these schools, students who are deaf or hard of hearing attending these inclusive schools and their parents.

After receiving ethical approval from Exeter University for this research, I contacted the Saudi Ministry of Education personally and obtained information on general elementary schools that enrolled students who are deaf or hard of hearing. Based on information on these target schools, I use critical case sampling (Onwuegbuzie, & Collins, 2007) to select 15 inclusive schools in Urban Riyadh (The capital city) and 12 Rural Jazan in the southwest of Saudi Arabia. These schools were chosen because they provided access to students who are deaf or hard of hearing to attend full or par-time depending on their

programmes. The application of critical case sampling of schools was in line with the study aims to explore the understandings and enactment of teachers' full participation of deaf or hard of hearing students in inclusive schools (Creswell, 2014). The teachers who taught students who are deaf or hard of hearing in the inclusive schools, the students and the parents of these students were targeted as information-rich cases to provide breadth and depth of data regarding the study's research questions (Creswell, 2014).

Recruitment of participants occurred through the database of the available students, their teachers and students' parents. Once these schools have been identified through the Ministry of Education database, I contacted the principals of the schools to seek their permission and invite their teachers to participate in the study. Permission was sought via email and hard copy letters to the schools according to their preferences. After the principals granted access to the schools, information letters and consent forms for teachers were distributed in the form of hard copies when I personally visited the various schools. Upon receiving information from the principals from the various schools, I met with parents during the parent-teacher meetings and invited those who have deaf or hard of hearing students attending the inclusive schools to volunteer to participate in the research. Parents who expressed willingness to participate were given consent forms. Following the teachers' acceptance to participate in the study, the hard of hearing or deaf students in their classes were invited to participate in an interview. I was supported by a sign language specialist in the recruitment process to explain the contents of the information sheets and consent forms to the deaf or hard of hearing students to ensure that they understood what the research involved.

3.7 Research context and participants

This study was conducted in two cities, Riyadh and Jazan in Saudi Arabia by utilising 15 elementary schools in Riyadh and 12 elementary schools in Jazan who claimed they practice inclusion or enrolled general education students and students who are deaf or hard of hearing. All the teachers in these schools were invited to participate on a volunteer basis. The school teachers had to complete consent forms to be accepted as participants. The teachers in the elementary schools were included due to their willingness to participate in the study. In the selection of participants, neither a random sampling nor a sample-size calculation was utilised to determine the sample sizes in Riyadh and Jazan.

Out of the 200 questionnaires distributed to the elementary school teachers, the final sample who returned the questionnaire for this research study was 66 participants (44.6%) from Riyadh and 82 participants (55.4%) from Jazan. Although I sent reminders to the participants in order to obtain more responses, the outstanding questionnaires were not returned. The final response rate was thus 74% (148), which according to Nulty (2008), is good. Out of the 148 teachers who answered the questionnaire, eight teachers (4 from Riyadh and 4 from Jazan) were selected based on their response indications on the questionnaire that they were willing to participate in a follow-up interview. In addition, five students who are deaf or hard of hearing and six parents who have deaf or hard of hearing students attending the elementary schools were purposively invited to participate in interviews.

Table 2 details of the participants

Participants	No	Location	Nature of participation
Teachers	66	Riyadh	66 filled in questionnaires; 3 of 66 participated in interviews
Teachers	82	Jazan	82 filled in questionnaires; 4 of 82 participate in interviews
Parents	3	Riyadh	Interviews
Parents	3	Jazan	Interviews
Students	2	Riyadh	Interviews
Students	3	Jazan	Interviews
Total	159		

Further details on the participants including their gender, qualifications, work experiences and age are reported in the findings chapter.

3.8 Tools for data collection

Two data collection tools were developed for data collection. The first was a questionnaire to collect quantitative data from teachers. Writing effective questionnaire items requires attention to the study purpose, research questions, and variables being measured (Fowler & Cosenza, 2008). To develop the questionnaire, it was important to carefully consider how the final questionnaire would facilitate the collection of relevant, valid and reliable data to answer the research questions posed in this study (Campanelli, 2008). Important also, was a consideration for the user-friendly nature and suitability of the questionnaire to respondents, and its potential to be modified without destroying the strengths of the questionnaire (De Leeuw, Hox, & Dillman, 2008). Several approaches were

used to develop the questionnaire for use in this study. The next section outlined these approaches.

3.8.1 Conceptualising the questionnaire

The first stage in the development of the questionnaire was the conceptualisation stage. According to Fowler and Cosenza (2008), the conceptualisation stage of a questionnaire allows me to identify key areas to focus the item writing on. Thus, at the conceptualisation stage, I used the inclusive education and full participation literature, and Vygotsky's cultural-historical theory to identify key areas and variables that the questionnaire should address. Variables such as concerns, attitudes, knowledge of inclusive teaching, practices, facilitators, and barriers were identified as the main focus areas to guide the framing of the questionnaire items. This careful approach to the constructing of the questionnaire items provided an ultimate lead for the questionnaire to identify concrete, quantifiable concepts (Billiet, 2006) and at the same time, provide indications of how the concept of full participation was enacted in the Saudi inclusive primary schools.

3.8.2 Questionnaire review by expert supervisors

The second stage has involved revision of the initial draft. After the initial items in the questionnaires were developed, I sent the questionnaire to the study supervisors for review and comments. The study supervisors made suggestions for some items to be deleted because they were ambiguous. Some items were found to measure more than one variable so those items were also highlighted for modification. Apart from structural changes, the supervisors also made some grammatical and syntax changes to some of the items so they read better.

3.8.3 Pilot-testing

Testing a draft questionnaire is an important aspect of its validation (Campanelli, 2008). The piloting of the completed draft questionnaire was conducted with 12 teachers for the purpose of testing the questionnaire for participant understanding to identify the appropriateness of item construction, how well the participants understood and responded to the questionnaire as well as to determine how long it will take to complete it (Brancato et al., 2006). The piloting did not raise significant issues except that the timing allowed for the questionnaire was too short and had to be extended from 30 minutes to 45 minutes to allow ample time for their successful completion.

3.8.4 Revision and finalisation of the questionnaire

After the pilot testing, the questionnaire was cleaned for any other errors and inconsistencies before it was used in the field to collect data. The final questionnaire has five parts. Part I included six questions that collected demographic information on participants. Part II contained 16 items that measured teachers' attitudes to full participation of students who are deaf or hard of hearing and was measured on a Likert scale of Strongly Disagree-1 to Strongly Agree-5. Part III of the questionnaire contained 15 items that measured participants' knowledge of full participation and inclusive teaching and was also measured on a 5-point Likert of Strongly Disagree-1 to Strongly Agree-5. Part IV of the questionnaire included 17 items on participants' practices of full participation involving students who are deaf or hard of hearing and Part V of the questionnaire also included 17 items on barriers and facilitators of full participation which were measured on a 5-point Likert scale of Strongly Disagree-1 to Strongly Agree-5.

3.8.5 Reliability of the questionnaire

Reliability scores of the questionnaire were computed, using SPSS version 24 which yielded a Cronbach's alpha of .811 for the total scale of 65 items, .753 for the attitude subscale of 16 items, .943 for knowledge subscale of 15 items .843 of practices subscale of 17 items and .736 for barriers and facilitators subscale of 17 items respectively. According to previous literature by Hays and Revicki (2005), and Revicki (2014), these reliability coefficients showed that the questionnaire and its subscales satisfied the internal consistency requirements and thus, were reliable for use to measure the participants' attitudes, knowledge, practice perspectives and facilitators and barriers to full participation of students who are deaf or hard of hearing. Appendix 1 included the full questionnaire that was used in this study.

3.8.6 Semi-structured interview protocol

This study has an interpretive qualitative component that offered opportunity to explore and explain participants' perspectives with regards to full participation of students who are deaf or hard of hearing. The use of interpretive research approach requires the generation of indepth interview data to provide thick insider perspectives of the participants (Creswell, 2012). It is argued that semi-structured interviews are, particularly useful for exploring the views of a person towards a phenomenon (Gillman, 2000). In Bernard's (1988) view, semi-structured interviews is best used when a researcher does not get more than one chance to interview participants. These ideas reinforced my approach for developing a semi-structured interview protocol for use in the qualitative data collection stage.

The development of the semi-structured interview protocol was guided by the initial analysis of the quantitative data. Questions of the interviews focused on full participation, professional practice, training needs, facilitators and barriers with separate questions for parents and students. After the initial development of the interview items, my supervisors reviewed the items for their relevance and wording before they were used in the interviews with the selected teachers, parents and students. (See appendix 2 for interview protocols). Although some questions for the interviews were predetermined, the semi-structured nature allowed for the order to be modified based upon my perception of what seemed most appropriate while interviewing in the field. In addition, the use of semi-structured interviews provided flexibility for question wording to be changed and inappropriate questions for any particular teacher, parent or student I was interviewing to be omitted, or additional ones included (Creswell, 2012).

3.9 Data collection procedure

Procedure: The corpus of data collected for this study included quantitative data (questionnaires) and qualitative data (interviews). Firstly, the teachers, parents, and students were informed about the aims of the study. All the participants signed a written consent agreement to participate and were notified that they could drop out of the study whenever they wanted without having to provide a reason for their decision. Furthermore, they were informed that the outcome of the study would be used to prepare a final doctoral thesis, journal articles and conference presentation in de-identified forms. No sensitive information, nor prolonged testing was involved in this study. The expected discomfort was the time participants spent filling in the questionnaire and/ or

participating in the interviews. All participants received adequate information about the nature of their participation and how the interviews were recorded.

Phase 1: The purpose of the questionnaire was to assess the teachers' attitudes, knowledge, practices and facilitators and barriers to full participation of students who are deaf or hard of hearing in inclusive elementary schools. Originally, I planned to personally distribute the questionnaires in hard copy, however, the participants suggested that I send the electronic version of the questionnaire so that they can complete it and return it to me by e-mails. As soon as the questionnaires were returned I input the data into my computer at the University of Exeter, which was password protected and securely locked. Each questionnaire was labelled with a number (U1, U2...for Urban) and R1, R2...for Rural) to enable me to conduct the relevant analysis pertaining to the two contexts where the data were collected. Initial analysis of the questionnaire was conducted to assess how the participants responded to the various items. This first inspection was used to frame some of the interview questions for the second phase of the study.

Phase 2: The aim of the interviews was to deepen understanding into the issues that teachers, parents and students who are deaf or hard of hearing consider important in terms of full participation in inclusive elementary schools in the Saudi context. In this phase, I conducted individual interviews with eight teachers, six parents, and five students. In the case of parents and teachers, due to geographic distance and traveling costs, telephone interviews were conducted. Each telephone interviews lasted on an average of 35 minutes. Although using telephones to conduct the in-depth interviews was faster, easier and cost effective, it neither allowed extended discussion of issues nor the

behaviour and body language of the interviewees to be observed (Block & Erskine, 2012).

Interviews with the five students were conducted in face-to-face mode with the help of a sign language instructor. Two students had their interviews at home while three interviews were conducted in coffee shops which were nominated by the parents. Students' interviews lasted on an average of 25 minutes.

Audio recordings were made with permission from interviewees on a dedicated recording device and then transferred to my computer at the University of Exeter. After each interview, the participants were asked to listen to the tape recording to confirm the accuracy of the interviews and to correct any discrepancies. This was a laborious process, however, it led to the validation and authenticity of the interview data. The number of participants and approaches adopted to collect data in this study are justified on the basis that the research purpose is to provide an in-depth analytic and theoretical discussion to the research questions that may help improve practice in Saudi Arabia in the field of full participation of students who are deaf or hard of hearing.

3.10 Quantitative data analysis

As Likert-type scale questions were used, information in the questionnaires was coded and entered into the Statistical Package for the Social Sciences (SPSS) version 24 programme. The questionnaire items included positive or negative statements that were measured on 5-point Likert scale of strongly agree=5 to strongly disagree=1. All negative items were reversed during data entry. The positive statements were scored '1' for 'strongly

disagree' and '5' for 'strongly agree.' Negative statements were coded in a reverse manner ('1'= strongly agree; '5'= strongly disagree). Descriptive analyses were performed on the quantitative data to determine the frequency, percentages, means and standard deviations for each question. These means were then used to conduct independent samples t-tests to identify differences in responses to each item between teachers in Jazan and Riyadh as well as between female and male teachers.

3.11 Qualitative data analysis

The purpose of the qualitative analysis was to complement and extend insights into the quantitative data (Bazeley, 2009; Creswell, 2012). In order to make sense of the data, I applied Braun and Clarke's (2006) six phases of thematic analysis approach. In the first phase, I familiarised myself with the data set when I transcribed the data, read and re-read to note down the initial ideas in the whole data set. After getting to know the essential elements of the data, I developed initial coding groups by systematically underlining segments of the data with different colour coding. I then collated data relevant for each coding group. (See Appendix 3 for a sample coding of the data).

The next approach in the analysis chain was to explore the coding groups to search for potential themes. This was accomplished by grouping codes into thematic groups. The fourth step involved revisions of the thematic groups, which was accomplished by checking whether the coded extracts made sense in relation to the complete data set. At this stage, I rejected and refined some of the thematic groups when they were inspected by my thesis supervisors for their general consistency with the research questions and aims. In the final level of the analytic procedure, I assigned meanings to the themes and connected them to extracts that helped to deepen understandings of each theme. The

completed analysis and themes were then scrutinised with the representative extracts in line with the research questions.

3.12 Ethical procedures

Permission to carry out the research was granted by the Exeter University's Research Ethics Committee (See appendix 4 for details). After this, permission was sought from the Saudi Arabian local education authorities, (See appendices 5 and 6). All teachers and parents were given explanatory statements that informed them about the nature of the research and how they would participate. All the participants signed informed consent forms which were returned directly to me prior to their participation in the research. Parents of students who are deaf or hard of hearing also signed consent forms for the five students who participated which were returned via the child's teacher.

In order to ensure that all participants understood the true nature of the research, the consent forms and explanatory statements were translated into Arabic, the native language of the participants. Researching with students who are deaf or hard of hearing can be complex (Guthmann & Sandberg, 2002). Therefore, prior to, and during the research process, I incorporated respect for dignity of the student by being responsible and caring. I incorporated informed consent procedure and avoided coercion. To enable participants to make truly autonomous choices, I engaged a qualified sign language professional who understood enough about the developmental, cultural, educational, social, emotional, cognitive, linguistic, implications of deafness to provide accurate information about the research to meet the participants' communication needs (Kitchener, 2000).

Together with the sign language expert, we ensured questions and procedures adopted during the interviews were culturally appropriate and met the expectations of the student participants (Guthmann & Sandberg, 2002). I adopted the principle of 'no harm' (Kitchener, 2000), by investing in sufficient time to orientate the students for the interviews to avoid pressure, or causing negative outcomes to their participation.

In addition, the subject matter concerning interviews was made available in advance to the deaf or hard of hearing students in order to orientate them prior to data collection.

The entire data collection process was anonymous, for example pseudonyms were used in reporting interview data and questionnaire data did not include names of the participants (Head, 2018). During data collection, attempt was made to respect the privacy and rights of participants by allowing them to determine the time and safe location for the interviews (Young & Barrett, 2001). Islamic cultural protocols were also respected by not involving the participants in the research during prayer times. Respect for rights to participate or withdraw at any time was made known to the participants during the explanatory stage that participation in the research was voluntary (Case, 2000). In addition, students were assured that their participation or non-participation in the study would in no way impact upon the internal assessment ratings allocated to them by the teacher and that their responses would not be discussed with their teachers. Similar assurances were given to parents and students on their information sheet and consent form and that a student's participation or non-participation in the study would have no influence on any aspect of their education.

Saudi society has often reflected a power imbalance that is rooted in cultural and religious issues. As participants were likely to view me in a privileged position as a researcher (Head, 2018), and might misunderstood the research as a way of identifying their teaching problems and writing a report to the Ministry of Education, I went through series of reassurance and sharing of data collected with the participants to verify and approve the data for analysis (Young & Barrett, 2001).

I realised that being respectful of the participants led to some flexibility and trust for the participants to express their opinions during the interview stage (Morrow, 2008). Finally, being an ethical researcher also led me to minimise the burden of study participation to the greatest extent possible by respecting and valuing their time (Case, 2000).

3.13 Fieldwork, research role and risks

Interestingly, the data collection for this study did not lead to any risks. The study followed written policies and procedures for identifying and analysing risks (Young & Barrett, 2001). These procedures include measures such as informed consent, information sheet, explanation regarding the voluntary nature of participation and the right to withdraw (Head, 2018). The discomfort to participants was not greater than the time they spent to be involved in the study. Adhering to the cultural protocols of Saudi Arabia, for example, dress and greeting codes, and polite ways of approaching women participants helped in avoiding risks. For example, with regards to the female participants, the questionnaires were sent to them by e-mail, while I conducted the interviews on the telephone.

3.14 My role in the research process

As a Saudi male researching issues of full participation of students who are deaf or hard of hearing in my home country, I was positioned both as an insider and an outsider in the research process (Creswell et al., 2011). My insider positioning was related to the similarity in race, citizenship, cultural background and language which made it flexible for me to enter the research site in Saudi Arabia without risks. In the qualitative phase of the study, I was the instrument of data collection and I worked directly with selected participant teachers, students and parents with key responsibilities to collect, describe and analyse data based on the experiences of these participants. It is likely that my interests, values, and positions (Case, 2000; Head, 2018) as a Saudi national have some influence on decisions I made in the research process. I was aware that my role in the interview might actually be perceived as one of an authority figure (Young & Barrett, 2001), because of my status of being a researcher and an academic who previously worked in a Saudi University. This prepared me to be mindful and conscious of my behaviours, language, and even my dressing when I met with the participants. In terms of my outsider positioning, my doctoral education and perspectives came mostly from by western values that in many ways consciously or unconsciously influenced the research process. In view of this, it was important for me to be attentive to my own subjectivities and biases throughout the interviews process and when conducting data analysis (Creswell & Plano Clark, 2007).

3.15 Limitations

This study included female and male teachers, students and parents; however, the numbers are relatively small when compared to the number of

elementary schools and the population across the various school settings. In this regard, the findings have no generisability to all the elementary schools in Saudi Arabia. Secondly, there is the need for gaining sense of how teachers approach inclusive teaching in their various schools. However, it was not possible to include all this in a single research. In this sense, it is not possible to validate teachers' perspectives of their inclusive teaching knowledge and practice against their actual classroom practice. This could be a goal for future research. Again, there are disagreements regarding how best to use mixed methods (Creswell & Clark, 2017, Clark & Creswell, 2010). I acknowledged that, the outcome of this research depended on my skills as a researcher and as such, there may be some methodological limitations that may not be apparent to me (Denscombe, 2008; Teddlie & Tashakkori, 2009). Finally, this study focused narrowly on the full participation of students who are deaf or hard of hearing. Thus, alternative voices from students without disabilities or those with other types of disabilities could not be heard. Despite these limitations, the findings that emerged from this study provided depth of knowledge in this area of full participation leading to specific recommendations to improve educational provision for students who are deaf or hard of hearing in inclusive elementary schools in Saudi Arabia.

3.16 Credibility and trustworthiness of the research

According to Creswell (2008) the development of a reliable and valid instrument for research must pay attention to the constructs to be applied to the formulation of the items or questions because clear and unambiguous questions often lead to obtaining meaningful answers. To ensure that all of the items in the questionnaire are clear and easily understood the initial questionnaire items were reviewed by my supervisors who are inclusive education experts. Expert

reviewers have been used in previous studies for pretesting questionnaires to identify problematic linguistic structures (Holbrook, Krosnick, Moore, & Tourangeau, 2007). I used the feedback to revise the items after which I conducted a pilot study to test the questionnaire with 12 teachers in Saudi Arabia to obtain the reliability of the questionnaire using Cronbach's alpha (Johnson & Christensen, 2010; Wiersma & Jurs, 2009). The reliability was reported under the instrument construction.

The questions for the interviews were constructed based on the literature on inclusive education, full participation and initial analysis of the quantitative data. In addition to these measures the qualitative data collection approaches and detailed analysis procedures were clearly described. During the research process, I was attentive to an ongoing process of awareness of my own values, beliefs and knowledge to ensure I challenged myself to step back and examine my thinking so that my own beliefs and biases did not undermine the outcome of the research (Shulman et. al, 2006). Stepping back from my position as Saudi citizen is one of the challenging things to do to, however, I relied on the theory informing the research and the methodological literature to ensure that the knowledge produced in this research is based on sound evidence (Shulman et. al, 2006).

Chapter Four: Presentation of Findings

4.1 Section One: Survey Findings

4.1.1 Introduction

The purpose of this mixed-methods research is to investigate the current state of full participation of elementary students (6-12 years) who are deaf or hard of hearing to gain insights into the nature of attitudes, perceptions, practices and barriers to their full participation. The results are presented in this chapter in two sections. The quantitative results are presented in Section One, followed by the qualitative findings in Section Two. The quantitative data comprise of 65 items divided into four subscales. The reliability of the overall scale yielded a Cronbach's alpha of .811. The attitude subscale included 16 items with a reliability of .753, Knowledge subscale included 15 items with a reliability of .943, Practices subscale contained 17 items with a reliability of .893 and Barriers and facilitators subscale contained 17 items with a reliability of .736. Taber (2018) provides the following descriptions for alpha values: excellent (0.93–0.94), strong (0.91–0.93), reliable (0.84–0.90), robust (0.81), fairly high (0.76–0.95), high (0.73–0.95), good (0.71–0.91), relatively high (0.70– 0.77), slightly low (0.68), reasonable (0.67–0.87), adequate (0.64–0.85), moderate (0.61– 0.65), satisfactory (0.58–0.97), acceptable (0.45–0.98), sufficient (0.45–0.96), not satisfactory (0.4–0.55) and low (0.11). As my alpha scores are within these ranges, the total scale and its subscales were regarded as reliable for use to gauge participants' attitudes and practices on full participation of students who are deaf or hard of hearing.

The majority of the questionnaires were sent to the participants as email attachments and the rest were distributed by me to the participants in the

schools, which were close to my residence. All the schools catered to both general education students and students who are deaf or hard of hearing in Riyadh (Urban) and Jazan (Rural). The expected target sample to complete the questionnaire was 200 teachers (100 from Urban and 100 from Rural) elementary schools in Saudi Arabia. Of the 200 questionnaires distributed to the inclusive schools, 44.6% (66) from Riyadh and 55.4% (82) from Jazan were returned. Several attempts were made by me to obtain more responses, including issuing additional copies to the non-respondents, but still the outstanding questionnaires were not returned. Thus, the final response rate of 74% (148) is considered good (Nulty, 2008).

4.1.2 Participants' demographic information

Part one of the questionnaire asked questions about the gender of participants, the location they work (Urban or Rural), professional qualification, professional role and age. Location and gender have been used to conduct independent sample t-tests on Part 2, 3, 4 and 5 of the questionnaire.

4.1.3 Gender of participants

Although the Saudi education system essentially segregates females from males, I sought the views of both female and male participants. The purpose is to understand if there were significant differences in how female and male teachers conceptualise and practise full participation of deaf or hard of hearing students in their respective inclusive schools. Out of the 148 participants, slightly over half of the participants 54.1% (80) are females and the rest 45.9% (68) are males. This may be because female teachers are more likely to be teaching at the elementary school level than are male teachers. Alternatively, this may be due to chance and that, female teachers happened to be more

willing than their male counterparts to return the questionnaires. Table 3, represents the age distribution of the teachers who responded to the questionnaire.

Table 3 Age of participants

Range	Frequency (%)
20-29	8 (5.4%)
30-39	71(48.0%)
40-49	54(36.5%)
50+	15(10.1%)
Total	148 (100.0%)

The results show that the teachers' ages vary with the majority being below 50 years of age. Considering the retirement age of teachers in Saudi Arabia is 60 years of age, these teachers still have time to support the inclusive practice agenda of the Saudi government.

4.1.4 Professional role of participants

Questions were asked to determine the role the various participants played in their respective schools. This is important in understanding the support students who are deaf or hard of hearing receive. For example, the presence of a high number of special education teachers or therapists would mean that there is some specialised skills that other teachers can draw upon to teach these students. This information is represented in Table 5.

Table 4 Professional roles

Roles	Frequency (%)
Administrator/principal	2 (1.4%)
General education teacher	54 (36.5%)
Special education teacher	85 (57.4%)
Teaching assistant	1 (0.7%)
Therapists/special educator	6 (4.1%)
Total	148 (100%)

From the table, the distribution of roles of the participants is concerning because of the small number of teaching assistants and therapists, but promising in terms of the high number of special education teachers available to support students who are deaf or hard of hearing in the inclusive schools. It may be that, the increased number of special education teachers in general education schools is the result of the Saudi government's substantial investment in the last 10 years to train more special education teachers both at home and abroad in order to support inclusive education implementation in Saudi Arabia (Alnahdi, 2014).

Table 5 Years of teaching experience

Age range	Frequency (%)
Less than 5 yrs	13(8.8%)
5-10yrs	47(31.8%)
11-15yrs	26(17.6%)
16-20yrs	31(20.9%)
21+yrs	31(20.9%)
Total	148(100%)

Table 5 represents the distribution of the participants' professional experience in years. This experience distribution shows that the teachers are mainly experienced teacher practitioners in their respective schools.

Table 6 Qualification of participants

Level	Frequency (%)
PhD	1(0.7%)
Master's Degree	17(11.5%)
Bachelor Degree	118(79.7%)
Diploma	10(6.8%)
Certificate	2(1.4%)
Total	148(100%)

Table 6 shows the qualifications of the participants. It provides evidence that a clear majority of the participants are qualified in general or special teacher education to teach in elementary schools and that they are better prepared to deliver teaching programmes that support all students in inclusive schools.

Table 7 Statistics of the overall scale

Subscales	N	Mean	Median	Mode	Std. Dev.	A
Attitude	148	57.31	58.0	56.0	6.23	.753
Knowledge	148	51.55	53.0	60.0	11.1	.943
Practice	148	57.14	59.0	54.0	11.4	.893
Barriers/Facilitators	148	54.56	55.0	55.0	9.5	.736
Total scale	148	220.56	220	228	19.28	.811

Figure 1 Sum statistic of the total scale

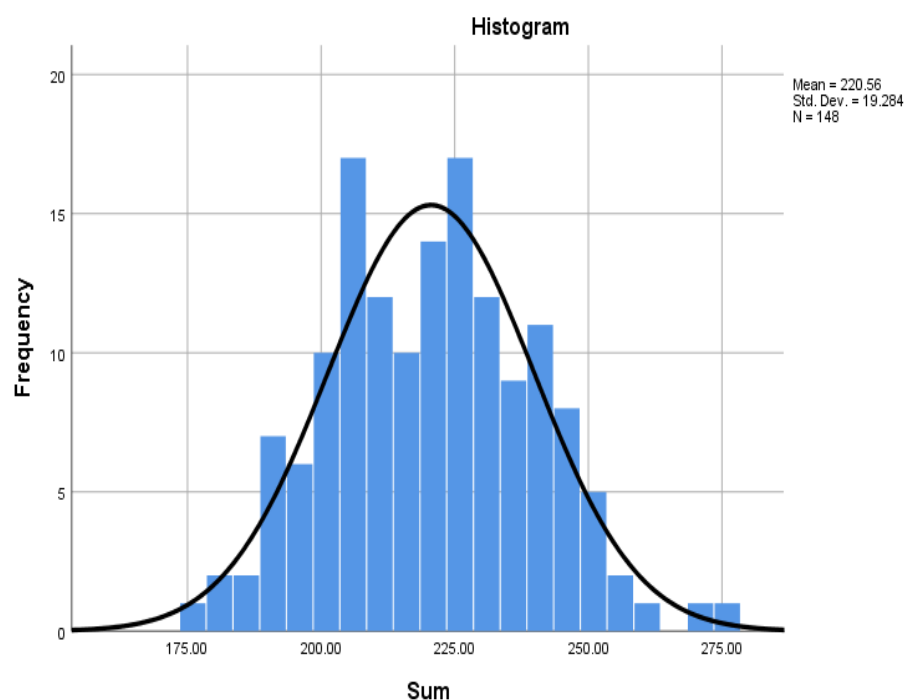


Table 7 and Figure 1 show the total scale and subscale statistics. This particular configuration of the subscales provides more insight into the participants' responses to attitude, knowledge, practice and facilitator/barriers to full participation. It shows relative consistency across the four factors and the data in the histogram shows a normal distribution with skewness at .166.

4.1.5 Attitudes towards full participation of students who are deaf or hard of hearing

This section of the questionnaire included 16 items that measured participants' attitudes on a five-point Likert scale. The questions sought to find out how the participants feel toward full participation of students who are deaf or hard of hearing in inclusive programmes. The findings in percentages are recorded in Table 8 in Appendix 1. In order to present how participants either responded negatively or positively to each item, (Strongly Disagree/Disagree and (Strongly Agree/Agree), have been combined into single categories to

simplify understanding of the data, and the neutral point has been reported in the middle as 'not sure'.

The data in Table 8 indicates strong mixed of positive and negative attitudes towards educating deaf or hard of hearing students full time in inclusive elementary schools. In terms of positive attitudes, the majority of the participants 80.4 % (119) are in favour that students who are deaf or hard of hearing should have all their education in regular schools. This is consistent with an overwhelming majority of the participants 84.4% (119) who considered that all students would benefit from having deaf or hard of hearing students in inclusive classes. The majority of the teachers 73.6%(109) also responded positively that deaf or hard of hearing students who are physically aggressive towards others should be included in regular education classrooms however, in contradiction, 70.9 (105) of the participants responded that students who are deaf or hard of hearing should be in special education classes. Other positive attitude statements relate to confidence to teach deaf or hard of hearing students in inclusive classroom 77.7% (115) and the acceptance of the majority participants 73.0% (108) that, inclusive schools are the appropriate educational placements for students who are deaf or hard of hearing.

Negative attitudes focus on resource, curriculum, behavioural and practice issues. Slightly more than half 53.4% (79) of the participants felt that regular education teachers should not be responsible for teaching deaf or hard of hearing students and 55.4% (82) responded that including deaf or hard of hearing students in all aspects of the curriculum is not possible in inclusive schools. The results again showed that the majority of the teachers 73.6% (109) were concerned about the behaviour of deaf or hard of hearing students in inclusive classrooms, and 61.5% (91) responded that the lack of adequate

support to help them in their practice was the underlying factor for negative sentiments toward inclusive education.

It is concerning to discover that a great majority of the teachers 87.2% (129) believed that including students who are deaf or hard of hearing in inclusive classes would reduce the academic standards of all students, and 68.3% (101) responded that their workload increased because of inclusion. With regard to supporting students' full participation, 76.3% (113) of the participants indicated that it is difficult to give equal attention to all students in an inclusive classroom when deaf or hard of hearing students are included.

4.1.6 Comparing differences in attitudes between Urban and Rural teacher participants

Results from an independent samples t-test of the overall attitude score indicated a slight difference between mean scores for Urban participants ($M = 58.02$, $SD = 5.3$, $N = 66$) and Rural participants ($M = 56.74$, $SD = 6.9$, $N = 82$), $t(146)=1.236$, $p=.236$. However, this was not significant at the 95% confidence level. However, a t-test of the individual 16 attitude items found significant differences on six items. The results are shown in Tables 10 and 11 in Appendix 1.

I used an alpha level of .05 for the statistical tests. The data in Tables 9 and 10 show that there were significant differences in the scores obtained from Urban and Rural teachers pertaining to six questionnaire items (2, 10, 11, 13, 14, &16). These are "students who are deaf or hard of hearing should be in special education classes" Urban ($M=3.79$, $SD= .79$) and Rural ($M= 3.49$, $SD=.79$); $t(2.371)$, $p=.019$; and deaf or hard of hearing students who are physically aggressive towards others should be included in regular education

classrooms” Urban (M=3.83, SD=.54) and Rural (M=3.49, SD=.84); $t(2.903)$, $p=.004$. Others are, teachers were “concerned about the behaviour of deaf or hard of hearing students in inclusive classrooms” Urban (M=3.83, SD= .65) and Rural (M= 3.55, SD=.90); $t(2.151)$, $p=.033$; “that including deaf or hard of hearing students in inclusive classes will reduce the academic standard for all students” Urban (M=4.17, SD= .54) and Rural (M= 3.91, SD=.89); $t(2.014)$, $p=.046$; and “my workload has increased because of inclusion” Urban (M=3.71, SD= .57) and Rural (M= 3.48, SD=.81); $t(1.983)$, $p=.049$. The greatest mean difference was on the item, “inclusive schools are the appropriate educational placements for students who are deaf or hard of hearing” Urban (M=3.42, SD=1.16), Rural (M=4.11, SD=.99); $t(-3.797)$, $p=.000$.

4.1.7 Differences in male and female teacher attitudes

A computation of t-tests on the overall scale did not show significant differences at the 95% confidence level. However, an independent samples t-test on the individual items showed that differences in attitudes on two items (8 & 11) were significant. These are “confidence to teach deaf or hard of hearing students in inclusive classroom” Female (M=3.89, SD=.55) and Male (M=3.57, SD=.78), $t(2.861)$, $p=.005$ as well as “being concerned about the behaviour of deaf or hard of hearing students in inclusive classrooms” Female (M=3.85, SD=.58) and Male (M=3.47, SD=.98), $t(2.911)$, $p=.004$ (Tables 11 and 12, Appendix 1). This shows that the female teachers have slightly more negative attitudes concerning the behaviour challenges of students who are deaf or hard of hearing than their male counterparts were.

4.1.8 Knowledge regarding full participation in inclusive programmes

Part 3 of the questionnaire aims to elicit participants' responses on their preparedness to implement inclusive strategies that accommodate deaf or hard of hearing students full time in inclusive elementary schools in Saudi Arabia. Table 13 in Appendix 1 shows the percentage distributions of their responses. Generally, the results show positive agreement with the 15 items. The majority of participants 71.7% (106) responded that they are well prepared and 67.6% (100) indicated they have knowledge and skills to effectively teach students who are deaf or hard of hearing in inclusive classes. In contradiction 58.1% (86) of the teachers responded that they do not have the knowledge and skills to teach deaf or hard of hearing students. It thus makes sense when 69.2% (103) indicated that they would like to have more training to effectively teach students who are deaf or hard of hearing.

The results showed that the teachers have professional development opportunities provided by their school leaders. This is evident in the response to the items on professional learning when a little more than half of the participants 57.4% (85) agreed that they were encouraged by their administrators to attend conferences/workshops/courses on teaching students who are deaf or hard of hearing.

Pertaining to full participation and inclusive teaching, 55.4% (82) claimed they have adequate knowledge in inclusive teaching and 64.9% (96) responded that they need more training on inclusive teaching. The majority of the participants 60.1% (89) indicated that they have adequate understanding of the concept of full participation, know how to use an inclusive teaching approach to teach students with deaf or hard of hearing students 60.8%(90), have adequate knowledge of how to develop creative new ways of working with all students

according to their needs 51.3%(76), and 54.0%(80) stated they know how to provide each individual student with different modes of instruction based on their needs.

An independent samples t-test was used to compare the responses from Urban and Rural participants pertaining to adequacy of knowledge and preparedness to teach students who are deaf or hard of hearing to ascertain if significant differences exist between their responses. The overall subscale and individual items show no significant differences between the Rural and Urban teachers. The computations are recorded in Tables 14 and 15 in Appendix 1.

Similarly, the responses of female and male participants pertaining to knowledge and preparedness to teach students who are deaf or hard of hearing were compared to ascertain if significant differences exist between their responses but no differences were identified. (see Tables 16 and 17 Appendix 1).

4.1.9 Perspectives on practices of full participation

Part 4 of the questionnaire, which included 17 items, sought to obtain participants' perspectives regarding the practices of full inclusion of students who are deaf or hard of hearing. The results in percentages reported in Table 18 Appendix 1, are generally negative, contradicting the participants' claim of adequate knowledge and positive attitudes reported earlier in the findings.

The findings (see Table 18 Appendix 1) show that 68.9% (102) of the participants were comfortable working collaboratively with special education teachers to support deaf or hard of hearing students in their classrooms. Another 69.9% (103) of the teachers responded that they were able to implement effective collaborative teaching practices for students who are deaf

or hard of hearing in a regular classroom, and 64.2% (95) responded that they always adjusted the content of lessons to accommodate individual differences. Surprisingly, 76.3% (113) felt they did not have enough time to design educational programmes for deaf or hard of hearing students.

More than half 60.1% (89) indicated that it was always difficult for them to maintain discipline in the classroom with deaf or hard of hearing students and less than half of the participants 48.6% (72) responded that parents worked collaboratively with teachers to support deaf or hard of hearing students. The results again indicate that 78.4% (116) of the participants found it difficult to give equal attention to all students when deaf or hard of hearing students are included, and 68.2% (101) indicated that it was difficult to cope with deaf or hard of hearing students' behaviours. Another interesting dimension of the finding is that although the majority 70.3% (104) claimed they adapted their teaching to meet the needs of all children, 79.1% (117) felt that deaf or hard of hearing students were not making adequate progress in their learning in inclusive schools. In terms of collaborative practices, 64.9% (96) responded that it was difficult to work with other staff members and less than half 45.3% (67) felt comfortable approaching their colleagues for help when teaching students with special needs.

Finally, slightly over half 52% (77) of the respondents indicated that their work with deaf or hard of hearing students was very stressful, 46.6% (69) felt that many decisions concerning teaching were taken without involving them, and 61.5% (91) indicated that they had less time to spend on their own family because of workload.

4.1.10 Comparing Urban and Rural teachers' responses to inclusive practice items

An independent-samples t-test of the overall practice score between Rural and Urban teacher participants was significant at the 0.05 level; Urban (M=61.0, SD=9.62, N=66) and Rural (54.0, SD=11.80, N=82); $t(146)=3.91$, $p = 0.000$. These results suggest that Urban teachers had more positive practice experiences than the Rural teachers.

Table 19 Group statistics for Practice items

Research Location	N	Mean	Std. Dev.	Std. Error Mean
Urban	66	61.03	9.61	1.18
Rural	82	54.00	11.80	1.30

Table 20 Independent Samples Test

		Levene's Test for Equality of Variances	t-test for Equality of Means			
		Sig.	t	df	Sig. (2-tailed)	Mean Difference
Practice	Equal variances assumed	.258	3.907	146	.000	7.03
	Equal variances not assumed		3.994	145.971	.000	7.03

An independent sample t-test on the 17 individual inclusive practice items identified significant differences to 10 items as reported in Tables 22 and 23 in Appendix 1 respectively. There was a significant difference in scores for, "I feel comfortable in working collaboratively with special education teachers when deaf or hard of hearing students were in their classroom" Urban (M=3.8, SD=.74) and Rural (M=3.38, SD=1.11); $t(2.869)$, $p=.005$; for, "not having

enough time to design educational programmes for deaf or hard of hearing students” Urban (M=3.82, SD=.70) and Rural (M=3.48, SD=1.04); $t(2.282)$, $p=.024$; for, “being able to implement effective collaborative teaching practices for students who are deaf or hard of hearing in a regular classroom” Urban (M=3.77, SD=.69715 and Rural (M=3.27, SD=1.14); $t(3.141)$, $p=.002$; and for, “working collaboratively with teachers to support deaf or hard of hearing students” Urban (M=3.56, SD=1.02) and Rural (M=2.50, SD=1.26); $t(5.525)$, $p=.000$.

Significant differences were also observed for, “difficulty to work with other staff members” Urban (M=3.76, SD=.82) and Rural (M=3.26, SD=1.27); $t(2.780)$, $p=.006$; for, “deaf or hard of hearing students being too difficult to teach in inclusive programmes” Urban (M=3.29, SD=1.09) and Rural (M=2.63, SD=1.18); $t(3.460)$, $p=.001$; for “regarding their work with deaf or hard of hearing students as very stressful” Urban (M=3.44, SD=1.01) and Rural (M=2.94, SD=1.24); $t(2.646)$, $p=.009$; for the idea that “they have less time to spend on their own family because of workload” Urban (M=3.74, SD=.97) and Rural (M=3.26, SD=1.17); $t(2.708)$, $p=.008$; for, “continually developing creative new ways of working with others” Urban (M=3.21, SD=1.02) and Rural (M=2.51, SD=1.24); $t(3.695)$, $p=.000$ and finally for, “being comfortable in approaching colleagues for help when teaching students with special needs” Urban (M=3.26, SD=1.10) and Rural (M= 2.63, SD=1.43); $t(2.9180)$, $p=.004$.

Independent Samples Test on overall practice subscale

4.1.11 Differences in perspectives between female and male participants on inclusive practice

To ascertain if there are significant differences between the female and male respondents to the full inclusive practice items, an independent t-test was conducted on the full scale. However, the mean difference is not significant at the 0.05 level. The t-test results on the individual items however, show that difference in opinions was significant on seven items as indicated in Tables 21 and 22 in Appendix 1. These include, not “having enough time to design educational programmes for deaf or hard of hearing students” Female (M=3.41, SD=1.00) and Male (M=3.88, SD=.74); $t(-3.190)$, $p=.002$; “being able to adapt teaching to meet the needs of all children” Female (M=3.28, SD=1.21) and Male (M=3.90, SD=.72); $t(-3.718)$, $p=0.000$; that “deaf or hard of hearing students were not making adequate progress in their learning in inclusive schools” Female(M=3.56,SD=1.08) and Male(3.90, SD=.78); $t(-2.133)$, $p=.035$; “difficulty of giving equal attention to all students when deaf or hard students are included” Female (M=3.56, SD=1.04) and Male(3.99, SD=.76); $t(-2.774)$, $p=.006$; that, “their work with deaf or hard of hearing students is very stressful” Female(M=2.93, SD=1.19) and Male(3.44, SD=1.08); $t(-2.741)$, $p=.007$; “have less time to spend on their own family because of workload” Female(M=3.26, SD=1.13) and Male(M=3.72, SD=1.03), $t(-2.550)$, $p=.012$ and finally for “always adjusting the content of lessons to accommodate individual differences” Females(M=3.25, SD=1.153) and Male(M=3.82, SD=1.09); $t(-3.090)$, $p=.002$.

4.1.12 Participants’ perspectives of facilitators and barriers to full participation

The final part of the questionnaire (Part 5) collected information on participants’ perspectives on facilitators and barriers to full participation of

students who are deaf or hard of hearing in inclusive elementary schools. Table 23 in Appendix 1 contains the percentage distribution of their conflicting perspectives. In terms of barriers, 49.3% (73) felt unsupported and 33.7% (50) felt supported by their administrators when faced with challenges presented by students who are deaf or hard of hearing in my classroom and the rest 16% (25) were undecided. This is similarly reflected in the feeling that colleagues were not willing to help 47.3% (70), and willing to help 34.5% (51) with issues that arose when students who are deaf or hard of hearing were included in their classrooms. A low number of the participants 18.2% (27) were undecided with regards to their colleagues' help when they encountered problems. Other barriers relate to lack of adequate administrative support for staff 54.7% (81), inadequate support staff for teachers 57.5% (85), low parent participation 61.5% (91), schools not having enough funds for implementing programmes successfully 50.0% (74), and not enough support for teachers' work 64.9% (96).

The results identify some facilitators worth noting. For example, the majority 73.7% (109) of the participants responded that the school districts provided sufficient opportunities for teachers to appropriately teach students who are deaf or hard of hearing. Another 77.1% (114) of the participants agreed that parents supported teachers in the education of deaf or hard of hearing students at home, and slightly over half 52.7% (78) stated that their schools had adequate resources to support all deaf or hard of hearing students to fully participate in class.

An independent t-test on the overall subscale of barriers and facilitators was not significant as the means of Urban and Rural participants were relatively the same. When individual items were tested, a significant difference was identified on one item (see Table 24 & 25, Appendix 1). This item relates to the

schools not having enough funds for implementing inclusive programmes successfully Urban ($M=3.53$, $SD=1.07$) and Rural ($M=3.09$, $SD=1.41$); $t(2.121)$, $p=.036$. This shows that Urban teachers feel their schools are less resourced than teachers in the Rural area.

4.1.13 Differences in opinion on barriers and facilitators between female and male teachers

Independent sample t-test was conducted to assess if the opinions of female participants differed from their male counterparts on barriers and facilitators of full participation on the overall subscale. This type of analysis is important considering that the education system in the Kingdom of Saudi Arabia is segregated on the basis of gender. Although the computation for the overall subscale did not identified a significant difference, a further t-test on the individual items identified significant difference between females and males' responses to items (3 & 14) which are shown in Tables 26 and 37 in Appendix 1 respectively. These are "colleagues are willing to help with issues which may arise when students who are deaf or hard of hearing are included in the classroom," Female($M=2.43$, $SD=1.36$) and Male($M=3.84$, $SD=1.01$); $t(2.061)$, $p=.041$ and "my school has difficulty in accommodating deaf or hard of hearing students because of inappropriate resources," Female($M=2.56$, $SD=1.12$) and Male($M=3.26$, $SD=1.25$); $t(-3.593)$, $p=000$.

4.1.14 Summary

The first part of this chapter has presented the quantitative results of this study. Percentages and independent samples t-tests were computed to demonstrate response differences in terms of study location and gender of participants. Although the attitudes of the teacher participants are generally

positive, perspectives on practices, knowledge and barriers and facilitators of inclusive elementary education for students who deaf or hard of hearing in Saudi Arabia are mixed. The qualitative results in the next section will deepen insights into the quantitative data.

4.2 Section Two: Qualitative Findings

4.2.1 Introduction

This section of the data presentation focuses on the main themes derived from the qualitative data. I collected the data through telephone interviews with eight teachers and six parents and through face-to face interviews with five students who are deaf or hard of hearing. The data set has been analysed using the framework analysis approach (Braun & Clarke, 2006). Details of the methodology and analysis procedures have been presented in the methodology section of this thesis. Samples of the coding procedures are presented in Appendix 3. The qualitative data presentation begins with participants' demographic details.

4.2.2 Demographic details of interviewees

The participants for the qualitative aspect of the study consisted of purposively selected parents, students, and teachers. As shown in Table 28, eight teachers (four males and four females) participated in the interviews. In addition, five students who are deaf or hard of hearing also participated in interviews. Four of the teachers were from Jazan (city in south west Saudi) and the other four were from Riyadh (capital city in the centre of Saudi). The age of the teachers ranged from 27 to 44, with the average age being 43. Five of the teachers had bachelor degrees with specialisation in deaf education and the other three had bachelor degrees with general education. Teaching experiences

ranged from 2 to 23 years and the average number of years of teaching experience, for all eight participants, was just over 12 years.

Table 28 Teachers' demographics

Pseudonyms of teachers	Research location	Gender	Age	Qualification	Experience in yrs.	Specialisation
T1 (Mr Ahmed)	Riyadh	Male	38	Bachelor	8	Deaf Education
T2 (Mr Omar)	Riyadh	Male	35	Bachelor	10	Deaf Education
T3 (Mrs Nadia)	Riyadh	Female	27	Bachelor	2	Deaf Education
T4 (Mrs Hannan)	Riyadh	Female	42	Bachelor	15	General Education
T5 (Mrs Tahani)	Jazan	Female	38	Bachelor	13	Deaf education
T6 (Mrs Shatha)	Jazan	Female	44	Bachelor	23	General Education
T7(Mr Ebrahim)	Jazan	Male	44	Bachelor	15	Deaf Education
T8 (Mr Basher)	Jazan	Male	39	Bachelor	11	General Education

Table 12 contains the demographic details of the parents who participated in the interviews. In all, six parents made up of four females and two males volunteered and participated. Only one female participant indicated that she was a 'stay at home mother'. The rest worked as a civil engineer, maths teacher, electrical engineer or language teacher and social science teacher. The ages of the parents ranged from 35 to 50 years with an average of 40.5 years. One of the parents indicated that she has two children who are hard of hearing. Except for this parent, the others have one child each with hearing difficulties.

Table 19 Parent's demographics

Pseudonyms of parents	Research location	Gender	Age	Qualification	Experience in years.	Profession	Family situation
P1 (Abeer)	Jazan	Female	37	Bachelor	2	Maths teacher	Has 2 children who are hard of hearing
P2(Abdullah)	Jazan	Male	43	-	-	Electrical engineer	Has a child who is deaf
P3 (Jumana)	Jazan	Female	38	Bachelor	7	Language teacher	Has a child who is hard of hearing
P4 (Yusra)	Riyadh	Female	40	-	-	Housewife	Has a child who is hard of hearing
P5 (Fatema)	Riyadh	Female	35	Bachelor	9	Social science teacher	Has a child who is hard of hearing
P6 (Yasser)	Riyadh	Male	50	Bachelor	26	Civil engineer	Has a child who is hard of hearing

Table 13 contains the demographic information for the students who were interviewed. All the five students are deaf or hard of hearing and were enrolled in elementary schools that were described as inclusive schools. The ages of the student participants ranged from 8-12 years of age with the average age being 9.8 years. Three of the student participants were males from Jazan and the other two were females and from Riyadh, the capital city of Saudi Arabia.

Table 20 Students' demographics

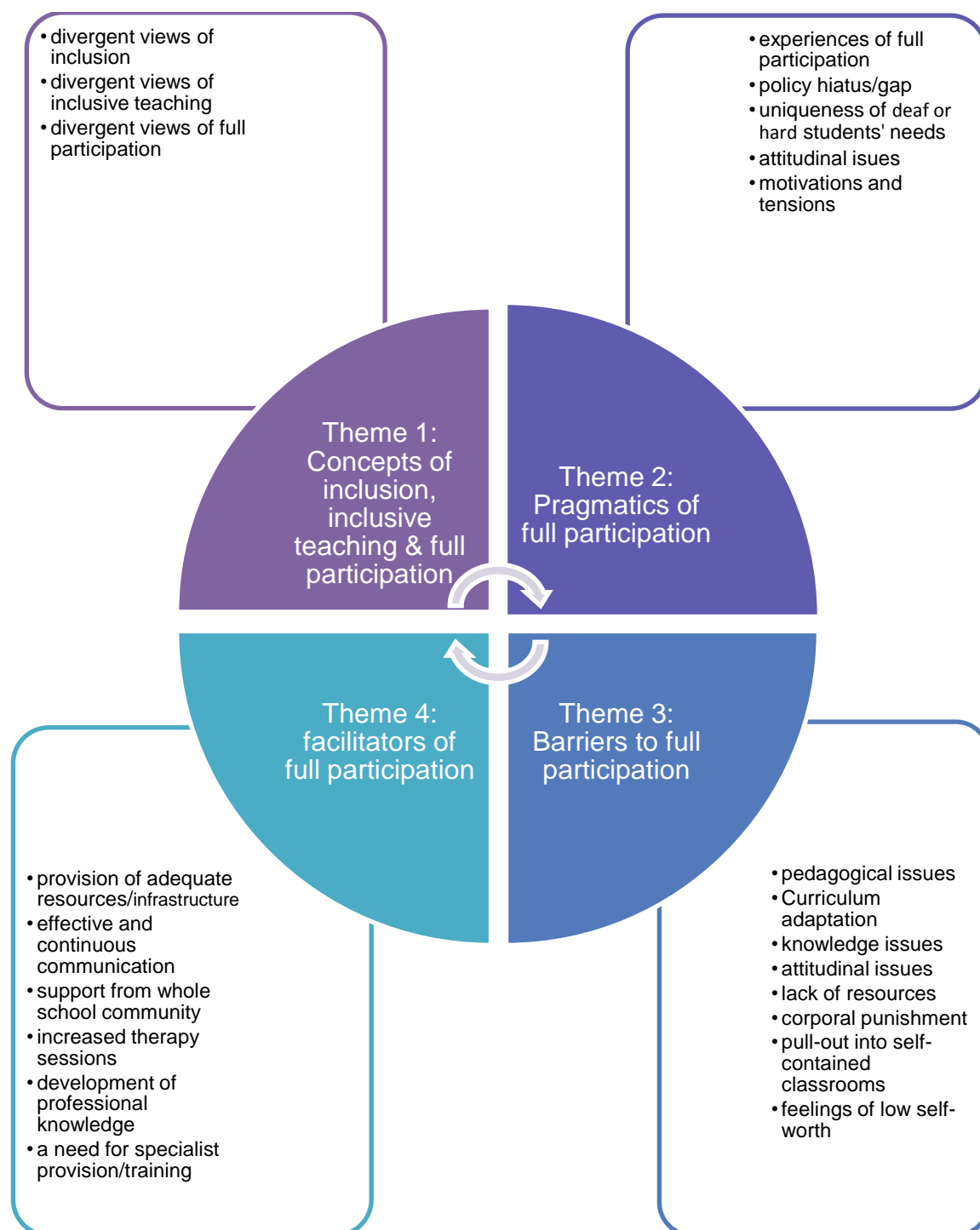
Pseudonyms	Age in years	Gender	Location
S1 (Nasser)	12	Male	Jazan
S2 (Basem)	8	Male	Jazan
S3 (Mustafa)	10	Male	Jazan
S4 (Marwa)	10	Female	Riyadh
S5 (Samera)	9	Female	Riyadh

4.2.3 Findings

In this study, four major themes emerged from the data collected from teachers, parents and students that describe the participants' conceptualisations, attitudes, practices, barriers and facilitators of full participation in inclusive school programmes.

The conceptual themes were the following: (a) Concepts of inclusion, inclusive teaching and full participation (b) Pragmatics of full participation (c) Barriers to full participation and (d) Facilitators of full participation. These themes and their subthemes are presented in the thematic diagram (Figure 2).

Figure 2 Thematic Diagram of the main findings from the qualitative interviews



Note: All the names which appeared with data in this research are pseudonyms.

4.2.4 Theme One: Conceptualisations of inclusion, inclusive teaching and full participation

The teachers, parents and students in this study spoke about a range of different meanings and explanations of inclusion, inclusive teaching and full participation of students who are deaf or hard of hearing.

4.2.4.1 Divergent views of inclusion

Each participant shared different thoughts about inclusion, full participation and inclusive teaching. Most of the participants described inclusion in terms of the integration of students with hearing loss amongst students without disabilities in regular mainstream classes. A qualified special educator [Mr Ahmed] with eight years of experience stated, “I think, inclusion is integration, it is the social and cognitive integration of students with special needs into regular schools.” Another teacher [Mrs Tahani] added that inclusion is “integrating the students of special needs into public school in one classroom and catering to their interest.” The teachers believed that inclusion will lead to acceptance of students with disability as well as help develop them as “one generation to co-exist with others without disability” [Mrs Hannan].

To another teacher [Mrs Shatha], inclusion connotes “integration of disabled students with students of general education, whether full or partial integration.” The definition of partial or full inclusion was expanded upon by another teacher who said:

Partial inclusion is including students with special needs into public school with their peers in activities during break times and in physical and arts education and full inclusion is including students with special needs into the public education system in all activities, and they are educated by general education under the

supervision of special educators, follow-up, and support of the special education teacher is important for full inclusion [Mr Ebrahim].

This definition added several dimensions which suggest that partial inclusion is limited to extracurricular activities without support for students to access the full curriculum. The teachers thought that general education teachers alone cannot deliver inclusion and that it needs supervision from special education teachers because of their specialised knowledge in disability. Another explanation of inclusion is:

Integrating the students of special and public school in one classroom and catering to their interest. All these students live in one society in Saudi Arabia so when you do inclusion they will develop as one generation with no difference or rejection [Mrs Tahani].

This perspective provides an additional dimension to previous conceptualisations. For instance, it demonstrates the realisation that there cannot be inclusion without catering to the needs of students with special needs. It shows that meeting the needs of students with special needs is key to their “integration within the general education classroom” [Mr Basher]. Other teachers defined inclusion as “fully integrating students into general education as a right of students with special needs with support services and support for each case as needed” [Mrs Hannan] that “combines special needs with ordinary people” [Mrs Nadia]. One key element of this conceptualisation is to see inclusion as a right of students to receive support services on a case by case basis. This suggests that the teachers recognise the uniqueness of each student, hence the need to tailor services to their unique needs.

Parents’ knowledge and perspectives regarding the concept of inclusion differs slightly from those of the teachers. While teachers generally referred to

students with special needs in their definitions, parents specifically tied their definitions to students with hearing impairment. For the parent participants, inclusion means “involving students who are hard of hearing with other children without hearing problems in general classrooms” [Abeer]. Another parent added that inclusion is:

designed to integrate children who have cochlear implant or the hearing impaired or any child with special needs with children without disabilities with the presence of teachers who are qualified and have the sufficient experience to deal with these children and integrate them with their peers regardless of their level of intelligence and abilities [Abdullah].

Parents explained further that in inclusive schools, “special education students are included with other students in general education, including children with hearing loss and children with cochlear implants” [Jumana]. Other parents described inclusion as schools “designed for students with and without special needs to be educated” [Fatema] and these include “children with hearing impairment, learning difficulties and other children with no problems” [Yasser]. It appears that the personal experiences of the parents played a major role in how they defined inclusion. For example, the demographic information showed that all the parents who were involved in the interviews have children with hearing difficulties. One interesting inference from the parents’ conceptualisations of inclusion is from Abdullah’s definition which places qualified and experienced teachers at the centre of inclusion.

Some of the students described inclusive schools as places where they can meet different students and make friends. Nasser, for example, said, “inclusive schools have many different students. You can make friends with them”. In addition Basem, the youngest of the student participants stated that in

inclusive schools, “there [are] many students and they are different.” In Samera’s view, inclusive schools “welcome everybody.”

Parents distinguished inclusive schools from other schools in terms of the presence of specialist teachers and resources that enable access and participation by saying, “inclusive schools may have specialist teachers in special education” [Abeer] or “the presence of special educational teachers who have sufficient experience to deal with this category of students” [Abdullah]. Another parent clarified that inclusive schools differ from general education because in inclusive schools there are “teachers for all cases of children” [Yasser]. A teacher clarified that the availability of specialist resources and support for diverse students “enables access and opportunity to learn and participate within regular classes [Mr Omar].

These multiple perspectives of inclusion suggest that both parents and teachers have some understanding of inclusion despite the complexity of the concept.

4.2.4.2 Divergent views of full participation

Participants conceptualised full participation of students who are deaf or hard of hearing as their involvement in all activities in the general education classroom. In fact there were several commonalities in the ways teachers described full participation of students in school activities in general. Some of the teachers commented on full participation as “the participation of students in all classroom and non-classroom activities” [Mr Omar]. Again, another teacher went deeper to offer insights into factors that enable this participation to occur by stating:

Full participation of students with special needs is engaging them in all curricula and all activities, and in all the activities students of general school are doing without being separated. If a student cannot do the same activities, the teacher needs to adjust the work to meet the student's way of learning so that they can participate. This means teachers need to know every student well before implementing full participation [Mrs Tahani].

This definition of full participation is comprehensive as it identifies the fundamental principles that must be implemented to enable the orchestration of full access and participation. The various definitions provided by teachers for full participation showed that their understanding of this concept is rich. For example, Mrs Shatha tied the full participation concept to preparation for life with adequate support:

Full participation is preparing students for practical life so that they have an effective role in society. You need different resources to prepare the students for living in society. It is not automatic that once they are in inclusive schools they will do well. You need to support them until they reach their goal.

It is interesting how the teachers in this study recognised that the success of full participation depends on adequate resources and full support. For instance, another teacher claimed that “doing full participation by including students with special needs into the public education system in all activities, needs the supervision, follow-up, and support of the special education teacher” [Mr Ebrahim]. One challenge of this conceptualisation is that full participation was seen as the sole responsibility of a special education teacher and without the involvement of the whole school community. Parents on the other hand, had difficulty clarifying the meaning of full participation. Two out of the six parents defined full participation as “doing classroom and extracurricular activities and

student activities at school [Yasser] and “giving the students with hearing impairment their natural rights to learn” [Abeer]. It may be that since these parents do not have a special education background, having a clear view of this concept is quite challenging.

4.2.4.3 Divergent views about inclusive teaching

When addressing the concept of inclusive teaching with regards to full participation of students who are deaf or hard of hearing, six of the eight teachers spoke of employing a variety of modern teaching approaches which include the use of technological devices. One teacher conceptualised inclusive teaching as “teaching students with special needs in the classes of where students without disabilities participate in all activities” [Mr Ahmed]. This definition was accentuated by Mr Omar who explained it as “the use of new and modern methods and teaching methods such as the use of active teaching in the classroom.” The participants believed that inclusive teaching engenders the use of a variety of materials in addition to drawing on the expertise of special education teachers within the general school to “create opportunity for every student to do something that is useful to them” [Mrs Tahani]. Another teacher provided a lengthy definition of inclusive teaching as:

the methods used in teaching...the modern strategies of active learning and there are more than 110 strategies, which aims to diversify the delivery of information and through these methods the role of teacher becomes only as a director while the main role in the learning process become the students' role. Most of these methods rely on technology, display devices and interactive screens. For example, in one lesson more than one strategy is used and an appropriate strategy is chosen for each behavioural goal. Some of these strategies, as an example, are brainstorming, collaborative learning, ice sticks, coloured cards, 6 hats,

numbered heads, etc.), and many other interesting strategies for learners [Mr Ebrahim].

These teachers were of the opinion that many students who are deaf or hard of hearing generally struggle to actually comprehend learning material, or verbal information hence, denying them access to the essential curriculum content. Thus, Mr Basher expressed a view that inclusive teaching is “total communication, for example, communication in sign language, verbal communication and communication with gestures.” On the other hand, Mrs Shatha said, “Sorry I have no background, I don’t know how inclusive teaching is different from other methods of teaching.”

4.2.5 Theme Two: Pragmatics of full participation

When addressing the practical aspects of full participation of students who are deaf or hard of hearing in inclusive elementary schools, the teachers and parents spoke of different positive and negative experiences which demonstrate the complexity of implementing full participation to help students learn in diverse inclusive school contexts.

4.2.5.1 Experiences of full participation

Some of the participants expressed positive perspectives regarding their experiences. For example, Mrs Hannan, stated, “Yeah, I support full participation because my school achieved impressive results.” This positive perspective is reiterated by a parent who claimed:

My son joined the inclusive school from the first grade and is currently studying in the fourth grade there is a difference in his achievement level from one period to another... Thank God all the time! My son has a cochlear implant and he goes beyond many difficulties, I hope the inclusive school offer him many opportunities to learn like his peers.

Although the absence of a shadow teacher in the classroom impact on his achievement, but thank God he is currently good and I hope his level will improve [Abdullah].

Some parents shared negative experiences about their children's participation in inclusive schools. These parents were of the opinion that many students who are deaf or hard of hearing generally struggle to understand materials or lessons because of the poor teacher quality, lack of adequate support and communication difficulties between teachers and students. They thought that students who have difficulty performing well in inclusive schools require better teachers and adequate resources in order to meet their educational needs. A parent [Abeer] drawing on her experience of inclusion in the Saudi context noted:

No, I don't support inclusion because the students' relationship is limited to special community and deprived of public relations" My children started their education in inclusive nursery and the great credit for their teacher which she play a great role in enabling them enter the public schools.

Another parent [Yusra] narrated that "communication with students in general is not good regardless of the methods used and this causes behaviour problem among deaf students." These negative sentiments about inclusion and full participation came from other parents who felt that the schools neither provided adequate attention and care to students who are hard of hearing nor ensured that specialists in hearing impairment, and speech and communication were available to serve students who need their services. Yusra again highlighted that "It is bad, because my child is not making good improvements, there are limited teachers to support the children, and there are too many students with few teachers to support them." Another parent [Fatema] narrated,

“I feel the school where my child is attending do not understand what they are doing.” These sentiments were supported yet, by another parent who claimed:

Inclusion is a good idea but it is not all that good experience. Progress of my child is very slow because teachers do not have time to do their job well due to the presence of other children [Yasser].

Contrary to these perspectives, Mrs Nadia, one of the teacher participants blamed parents for their negative experiences by saying, “It is the parents lack of interest and lack of cooperation with the teachers and with the schools in which the students are that create the problem.”

However, data from the student interviews indicated that deaf or hard of hearing students were able to access the physical spaces of the school, play during recreation periods and eat together during mealtimes but were segregated into separate classrooms during teaching and learning. For example, Samera said, “I play with my friends outside the classroom but not with them in the classroom. We learn in separate classrooms.” Additionally, Marwas stated, “teachers don’t allow me to participate in the school shows”, and Mustafa claimed that during “break time he engages with other students but... learn in special classroom without other students.” Basem, another student added, “the other students don’t come to their classroom.”

4.2.5.2 Policy hiatus/gap

All the teachers agreed that policies are important however, it was difficult for these teachers to articulate any details concerning the inclusive school policies of Saudi Arabia. Specifically, the teachers spoke about full or partial integration while others referred to the right of students to be educated in

inclusive schools. One particular teacher [Mrs Tahani] provided the following observations:

Full participation will create opportunity for all students so there is need for policy that teachers can understand. The policies should create the same opportunity like other students without disability.

Four of the six parents indicated that they had no knowledge of inclusive policies. Two parents who claimed to have some policy ideas stated, “I have no knowledge about the policies but my point of view is to create the largest number of schools to be integrative schools because there are no many of them” [Abdullah]. This finding provided evidence that some of the parents in this study felt the need for policy to mandate adequate resources to meet every students’ needs. Fatema, one of the parents believed that policy can ensure the human rights aspect of education is fulfilled for all students: “all I know about policy is that it is the simplest rights for students to have good education” (Fatema). These extracts state that parents believe their children have a right to education and that inclusive schools fulfil this right.

4.2.5.3 Uniqueness of the educational needs of deaf or hard of hearing students

When participants talked about their experiences, they made statements about the uniqueness of the educational needs of deaf children. Both teachers and parents were of the view that students who are deaf or hard of hearing cannot be taught like other hearing students. The participants in this study observed that communication is key to teaching and learning, hence the need for professionals in speech therapy to provide this service to the students. The participants believed that the success of inclusion and full participation depends

on the provision of unique services to students who are deaf or hard of hearing.

One parent observed:

The inclusion was socially successful and academically unsuccessful because deaf students are not making progress when their unique way of communication has not been supported [Fatema].

A teacher's [Mr Ebrahim] view corroborated this statement, "deaf or hard students are not like other students, they need teachers who understand their unique behaviours and how they communicate before you can support them." These perspectives suggest that teachers were of the view that unless someone has speech and language speciality, they are not able to effectively teach deaf or hard of hearing students.

4.2.5.4 Attitudinal issues

An important finding to note in this study was the mixed attitudes from parents and teachers regarding full participation in inclusive elementary schools by students who are deaf or hard of hearing. Some of the attitudes emanated from the participants' personal experiences, professional capabilities, resources issues within their various schools and deaf or hard of hearing students' particular education needs. For instance, one of the teachers, Mrs Nadia, expressed as follows, "I am with partial integration in public education. In my experience, a deaf student tends to have a weak hearing partner, preferring to belong to a small group that is better than a large group that produces high voices that hurt the student's ear." Mrs Nadia's extract seemed to uncover her insider perspectives about her experience suggesting that students were grouped with similar disabilities in large classrooms making it difficult for them to experience full participation. This finding is supported by student interviews suggesting that during lessons, students were pulled into separate classrooms

and only allowed to interact with those without hearing impairments during mealtime and recreational activities. While some teachers support inclusion and full participation, their positive attitudes are conditional on the availability of human and material resources.

It is a strong positive step, which is enabling them to feel free from isolation. They have opportunity to develop their abilities and skills to the maximum level. But we need to implement this with adequate support from school authorities and parents [Mrs Hannan].

Similarly, Mrs Tahani, one of the teachers indicated, “I like full participation of deaf or hard of hearing students when we have fully trained teachers and resources.” Indeed, full participation is seen as a great idea when implemented well with full support from government and parents as indicated in the following statement, “I think it's great if done properly with support from government and community, I mean parents” [Mr Ahmed]. Some of the teacher participants spoke with a charity and pity model view when they shared their attitudes to inclusion and full participation of students who are deaf or hard of hearing claiming:

We must pay more attention to this category of practice and look at them with a view of mercy and not throw them only in general schools without the slightest benefit. If we cannot provide the resources that they need then we should not send them there [Mrs Tahani].

This perspective is supported by some other teachers and parents who noted, “I strongly agree for students who are hard of hearing with condition that they are supported with compassion” [Mrs Shatha], “I feel it is only good if there are resources and special teachers to support my child. The child must reach the level of his or her eligibility to be included in general classrooms [Abeer],

“Yes, especially from psychological point as not feel inferior” [Abdullah] and “Yes with full-time so that they can benefit from as much education as possible” [Jumana]. Another parent [Fatema] emphasised, “yes, but the characteristics of people with special needs must be taken into account.”

Some other teachers expressed disapproval of full integration of all categories of auditory disabilities. For instance, Mrs Nadia claimed:

The inclusion of some students gives a reverse result. The child may have residual hearing but the pronunciation remains much lower than normal students. As a result, this leads to losing confidence among some students. The environment does not support everyone because, some teachers are not up to the task and the curriculum is very rigid [Mrs Nadia].

Two of the eight teachers and three of the six parents expressed negative attitudes towards full participation and inclusion indicating that they were not in support of the concepts as far as students who are deaf or hard of hearing are concerned. Some of the participants associated their negative attitudes with lack of resources and poor teacher quality saying, “No, because students with hearing disabilities face difficulties if the integration if it is entirely left with general education teachers who do not have specialised training to support their learning” [Mr Basher]. Another teacher said, I dislike the idea ... because the benefit to them is few..., it is a bad idea if the government cannot provide the resources needed to support them [Yusra]. This is reiterated by another parent who said:

I do not support it because it needs more attention and support. There are common lessons that students with hearing impairment cannot understand, comprehend and it is imposed from the school. It is best to focus on the development of visual and hearing skills of the students separately [Abdullah].

4.2.5.5 Motivators and tensions

During the interviews, participants spoke about what motivated them when they implemented inclusive education as well as what caused them stress. A parent participant related her motivations to the gains students who are deaf or hard of hearing would derive from inclusive education and full participation by saying, “I feel very satisfied and inspired because he will gain, learn and benefit more by his presence in public education” [Jumana]. Teachers linked their motivations to their professional preparation as teachers which gave them courage to serve the needs of students who are deaf or hard of hearing in inclusive classrooms.

I was prepared as a teacher for hearing impaired students through courses and exercises that guide me to know how to deal with these students and integrate them into general education classes [Mr Ahmed]

Another teacher [Mrs Hannan] emphasised that “the best training courses for me are those in specialist areas to better support deaf or hard students, and if need be, isolate these students into special classes.” The findings indicate that the establishment of specialised training courses in deaf education field, which some teachers attended, served as the motivation factors for them to accept the idea of full participation. For instance, Mr Omar, one of the teachers said, “I prefer to integrate students fully into the public classes and encourage them to participate fully because, I know what I am doing. My training courses in deaf education helped me a lot.” In addition, some teachers were motivated because of the “ways deaf students are able to make friends and learn from other students to optimize their own learning and have opportunity to try many things with their peers” [Mr Ebrahim].

These perspectives suggest that the teachers derived their motivation from the readiness to teach in ways that maximize active participation for all students during classroom activities. The teachers believed that understanding the area of deaf education was a necessary professional skill for improving the educational outcomes of deaf or hard of hearing students in inclusive schools. However, the teachers agreed that there were other pedagogical, and administrative issues that significantly create tensions when attempting full participation implementation for students who are deaf or hard of hearing in Saudi Arabia. A teacher expressed, “I don’t like the way things are centralised. We need some flexibility in this type of education” [Mr Omar]. Another teacher relate the implementation tension to lack of resources and lack of parental support,

I prefer to shorten each lesson with headings and to reduce the language used in their curricula. That is, when deaf students are admitted without appropriate resources, it puts stress on the teachers. I also don’t like it when parents just drop their children and do not take any interest in their education. They leave everything to the teachers [Mrs Nadia].

The issue of resources was mentioned by another teacher as a demotivation and that “if the students are there without resources this is what I dislike” [Mr Ahmed]. Other teachers claimed that “the classrooms are not appropriate to include deaf or hard of hearing students. For example, there is absence of materials and educational technology” [Mrs Tahani]. Coupled with this are issues of “pressure from parents for every student to pass their school test because their expectation is high but some of the students are very slow”. Another teacher explained his frustration in this way:

What I dislike is the pressure on teachers for the students to make rapid educational gains. We need to take time and take into account the

individual differences in the municipality's disability and its relationship to specific education of the deaf. We can't rush the education but if there is too much pressure to make things happen quickly, many teachers don't like this [Mr Ebrahim].

Mr Ebrahim's sentiments were shared by other teachers who said, "I don't like pressure on teachers from school administrators. They expect us to do more with little support" [Mr Basher], and "with the idea of inclusion, I am happy but I do not know what is going on with this push" [Fatema]. Largely, the findings in this theme indicated that the participants have mixed feelings about full participation in inclusive schools. Two opposing forces are acting on the teachers. For example, while they are enthused to implement full participation, pragmatic issues related to lack of adequate support and resources, and working under pressure seemed to be pulling them away from effective implementation of the concept of full participation of students who are deaf or hard of hearing in inclusive schools.

For all the deaf or hard of hearing students who participated in this study, friendship was a fundamental motivation for their participation in inclusive school. However, their motivations for friendship were sometimes challenged by difficulty in communicating with their peers without disabilities, segregation during teaching and learning, and negative peer attitudes. Marwa for example, said: "I would like to participate in lessons with other students if they are good with me." Details of this data are presented under barriers to full participation. Another student described his motivation and tension in this way:

I like inclusive schools because I have best friends there and they are different. It is good but [I] don't have a friend who can speak. My best friend lives far away from here and he is deaf.

4.2.6 Theme Three: Barriers to full participation

The pragmatics of full participation in inclusive schools for students who are deaf or hard of hearing identified several barriers to its implementation. Participants spoke of six different types of challenges which might have negatively influenced inclusion and full participation.

There were several commonalities in the types of barriers teachers talked about during interviews.

4.2.6.1 Pedagogical issues

4.2.6.2 Adaptation of the curriculum

One of the barriers most teachers talked about is difficulty adapting the curriculum to meet the needs of students who are deaf or hard of hearing. One teacher indicated, “the difficulties I face are in the educational system are curriculum modification, teaching methods, teaching aids and classrooms management issues” [Mr Ahmed]. Another teacher reiterated that “the curriculum is difficult, it is crowded and difficult to modify for different students in their own classes” [Mr Omar].

Further, a teacher elaborated on the complexities of the curriculum and the lack of support from school leaders to promote their efforts in modifying the curriculum or adapt it to suit diverse students’ needs.

The curriculum is packed with different subjects and there is pressure on teachers from principals to complete the work and show evidence that every student is learning, but the problem is that our deaf students cannot understand the lesson the way it is, so we have to adapt it...I want to say that it is sad because our principal does not care or support as with training courses of how to modify the work [Mrs Hannan].

Parents also spoke a lot about curriculum, teaching and their lack of confidence in some of the teachers to deliver lessons that cater to the different learning styles of students in the inclusive schools. For instance, Abeer, one of the parents said that “the ready school, modified curriculum, trained teachers and transportation are the major challenges.” Another parent [Jumana] claimed that “student may encounter some difficulties in the course of doing some activities and are unable to perform the activity well when they are expected to go through the same curriculum.” This perspectives are supported by yet, another parent who reported that,

Modification of curricula to increase the achievement of the deaf and the hearing impaired is the problem, providing educational materials to the deaf and hard of hearing students, provide periodic visits to check their earphone and provide buses designed for them are also other challenges [Fatema].

The descriptions of the barriers showed that not only was curriculum modification a concern for the parents, but for some parents, the inclusive schools sited far away from their neighbourhood communities hence, the need for a reliable transportation system to enable their children access the curriculum on regular basis.

4.2.6.3 Knowledge issues

The second pedagogical barrier to the implementation of full participation in inclusive schools is related to teacher knowledge and self-efficacy. Most teachers felt that they were not properly trained in the area of inclusive education to enable them to support students who are deaf or hard of hearing in inclusive schools. These perspectives came mostly from general education teachers as evidenced in the following statement:

I am not trained to be able to identify all the disabilities and their characteristics and then develop teaching methods and strategies to suit all segments in the classroom. But since I am not a special educator, my skills are limited and I need support from special education teachers to do my work well [Mrs Hannan].

Another teacher [Mrs Tahani] echoed a similar perspective claiming, “in terms of knowledge I don’t believe every teacher knows how to teach deaf students.” Similar perspectives were shared by another general educator who did not trust in her own ability to support students who are deaf or hard of hearing in inclusive schools. This teacher expressed the following:

No, some specializations are needed but we as general education teachers do not feel supported especially if teaching is assigned to us. I don’t feel competent enough in this but if I develop my professional knowledge and I can better support their learning [Mrs Shatha]

Two out of the six parents also claimed that “there are demands for teachers’ awareness and to deal with family properly and appropriately support all students” [Yusra] and that “poor teacher skills and school practices are very negative towards parents” [Fatema]. In view of these identified barriers, it is clear that the main implication is professional learning for teachers. This should focus on understanding their students’ learning profile as well as how to work with parents to support the educational experience of their children to significantly improve the gains in their academic achievement.

4.2.6.4 Attitudinal issues

The findings also identified barriers related to attitudes which inhibited the implementation of full participation in the inclusive schools. Some of the attitudinal issues were related to lack of respect and collaboration between special and general education teachers and others pointed to the lack of

willingness on the part of some teachers to accept and teach students who are deaf or hard of hearing. Mrs Hannan, one of the teacher participants for instance stated:

The challenge is teachers' reluctance to teach students with special needs. I think attitudes of some of our colleagues is very bad. Even some special education teachers have very bad attitude to general education teachers. They don't respect us and collaborate very well. They think they are the experts and we just have to listen to their ideas. If we contribute ideas they would say, we know the students from our expertise, so we should not change the programme and do what we are told.

The issue of respect emerged from another teacher's comments:

My major difficulty is the lack of respect from Special Education teachers. They think they are the experts so look down upon us. Sometimes they take decisions without including us and just tell us to do this or that [Mrs Shatha].

Some of the teachers believed that because of issues of teacher quality, full participation in inclusive schools will have only social benefits for students who are deaf or hard of hearing but students will have a drawback in academic aspects of their learning.

Students with hearing impairment may develop social and language skills but the quality of education may be affected if general education teachers don't know what they are doing or not supported [Mrs Nadia].

Some of the teachers spoke about pressure from parents which affected their attitudes to full participation of deaf or hard of hearing students. For example, Mrs Tahani, one of the teachers declared, I don't like the pressure parents put on teachers, it is like forcing teachers to make their children pass their academic tests. Apart from parental pressure on teachers, another teacher

[Mrs Shatha] associated her negative attitude to students and other teachers' behaviours saying:

One of the difficulties I face is distraction from students, when they have full integration and also, some general education teachers do not accept these students.

Generally, parents have positive attitudes towards full participation of their children in inclusive schools, but on the condition that "the schools are ready to adjust to accommodate the needs of the students" [Fatema] by "respecting the children's individuality" [Jumana].

Parents' support for their students to access and fully participate in inclusive schools were confirmed by student interviews. Students spoke favourably about their parents' preference for inclusive schools in the comments that follow:

My parents are happy that I go to general school (Nasser)

My family is happy that I go every day to see my friends (Basem).

Yes, my parents support me to be in schools with other hearing students (Mustafa)

Marwa declared that her parents "like it" that she was in an inclusive school. Similarly, Samera claimed, her parents "are happy" for her to participate in inclusive schools. Despite the positive outlook, Nasser expressed that their parents were considering sending him to a special school because of the travelling distance to access inclusive school by saying, "my dad drives every day for long distances...he wants me to attend special school nearby and he thinks I may be better." Mustafa, on the other hand revealed, "I may go to another school for the deaf next year where I can learn better."

Students spoke about peer victimisation in the inclusive schools which affected their inclusive school adjustment and full participation. Students mentioned direct verbal behaviours such as ridiculing and negative comments that made it difficult for them to make friends with students without disabilities. According to Samera, one of the student participants, “being in an inclusive school was difficult in the beginning because other children say very bad things and laugh when we do things.” Another student added, “I do not like playing with some students during the break because they make fun of my nose and mouth and some of them even beat me” (Nasser). In addition, the youngest student participant described how peer victimisation and negative attitudes from older children challenged his belonging to the inclusive school:

Some older students don't like me to play with them because I don't understand them. I feel sad and I cry sometimes because they tease me (Basem).

One student described her dislike for inclusive school based on the negative attitudes displayed towards them by their peers saying, “Special schools are better because there are no ridicules from children without disabilities; they provide better care.” These perspectives demonstrate students’ sense of awareness of their inclusive school environments and their personal experiences.

4.2.6.5 Inadequate number of special education teachers

The participants in this study thought that full participation of students who are deaf or hard of hearing is problematic because of the lack of adequate special educators to support mainstream teachers. Mrs Tahani for example, maintained that “if special educators are not available, it would be a waste of time to push deaf students into mainstream inclusive classrooms.” Some of the

teachers believed that it is not a good practice to allow general education teachers to teach students who are deaf or hard of hearing. For example, Mrs Shatha said,

what I dislike is to assign some programs to non-specialized teachers. There is lack of adequate number of special education teachers who specialised in deaf education so some specialised programs for the deaf are pushed down to general education teachers which is leading to ineffective inclusion.

These perspectives were supported by some parents who suggested that the hindrance to full participation is “including deaf or hard of hearing students in inclusive schools without first training teachers in special education” [Abdullah]. Another parent indicated that “deaf students may not be able to get all that the teacher says without knowledge in special education, he will not achieve the desired benefit [Yusra]. In addition, “the availability of shadow teachers in the classroom” was identified by a parent to help students overcome many learning difficulties [Jumana].

4.2.6.6 Lack of resources

One major barrier identified by the participants relates to inadequate resources. Mrs Tahani commented,

I know, it is the rights of deaf or hard hearing students to access resources but we do not have all the resources. The government does not provide enough technological resources that can help us implement effective teaching for deaf students.

Another teacher [Mr Ebrahim] was of the opinion that “they have some resources like teaching aids but lacked some specialised technological resources that can help in communication.” According to Mr Ebrahim, “one

difficulty is the weakness of the linguistic output of students because of lack of resources in this area, for example, (the brainstorming strategy), the hard of hearing student needs a good linguistic output to express the answer in his her own way. Mr Basher added that there was “lack of an appropriate learning environment because some classrooms are crowded with little resources.”

4.2.6.7 *Punishment*

Student interviews revealed the theme of corporal punishment in inclusive schools. Students mentioned that although they liked their teachers and want to be in inclusive schools, punishment often made them fearful of school. According to one of the student participants “some are good teachers and some are not good, they hit sometimes and I am scared” (Mustafa). This feeling of fear is reiterated by Nasser when he stated; “the teachers are good and helpful, they do their best to teach me but sometimes you are afraid when they hit you” (Nasser).

4.2.6.8 *Pull out into self-contained classrooms*

In inclusive schools, all students are given the same educational opportunities to interact and learn with others who have a wide variety of abilities and backgrounds. However, the findings of this study showed challenges of inclusion. In this study, one of the major challenges to full participation of deaf or hard of hearing students in the Saudi elementary schools from the perspectives of students was the issue of segregation and exclusion. All five students who participated described their dislike for pull out practices. For example, Nasser said, “I prefer inclusive schools but I have spent all my time in this school in special classes.” He further elaborated on his experience in the inclusive school:

All students in my classroom are students who are deaf and hard of hearing. We learn in special classroom but we participate in the break time and physical activities with other students who have no hearing impairment (Nasser).

The second student, Basem, expressed that the only time they had contact with students without disabilities is during recreational activities: “The other students don’t come to our classroom but we play with them outside.” Generally, the students perceived their pull-out and exclusion disempowering. For example, Mustafa stated:

I wish to stay for long in the inclusive school but I cannot because we leave early even before other students. I don’t like to leave the school early. We are allowed to eat and play in the break time with other students but we learn in special classroom not with other students.

It became apparent through the students’ comments in the study that pull-out practices led to more negative thoughts. Students’ negative views were principally shaped by the way they are excluded from participating in the general education classroom with their peers without disabilities. This is evident in Samera’s statement:

I participate in activities with my peers outside the classroom but not with them in the classroom. We learn in separate classrooms.

Similarly, Marwas’ exclusion is echoed in the quotation that follows: “inclusive schools are good but teachers don’t allow me to participate in the school shows.” As a result of these experiences, the school practices raised questions about whether the schools are inclusive or practicing integration.

4.2.6.9 Feelings of low self-worth

As a result of their participation in schools that enrolled both students who are deaf or hard of hearing and those without disabilities, three of the student participants came to the same realisation about the physical appearances and characteristics of peers who are different to them. This realisation lead to expressions depicting low self-worth as indicated in the two quotes below.

I always feel jealous of my peers and I feel they are lucky because they don't have disability (Marwa).

I am not ok, I keep trying my best to make friends but it's is very difficult...I always feel jealous of my peers and feels that I lacked proper way of hearing (Samera).

4.2.7 Theme Four: Facilitators of full participation

The participants spoke of seven different types of facilitators regarding full participation in inclusive elementary schools for students who are deaf or hard of hearing. The participants suggested that the provision of these facilitators can help improve the quality of full participation. There were several similarities in the types of facilitators teachers and parents described. The descriptions showed that the provision of resources, infrastructure, effective communication, professional knowledge, and support from school community among others can improve the practice of full participation.

4.2.7.1 Provision of adequate resources/infrastructure

In terms of resources teachers [Mr Ahmed] indicated, “we have some resources to support our teaching which is really good.” This point is supported by Mr Omar who said that “adequate resources matter and we need to match the students’ levels to teacher skills and resources.” Some other teachers expressed that human and materials resources matter and in particular teachers need to be well vested in pedagogical strategies for students who are deaf or hard of hearing:

The success of full participation depends on resources and teachers. It is important that the teacher be familiar with the methods of teaching students with hearing disability and also there should be a specialized teacher with whom the teacher works in the inclusive classroom [Mrs Tahani].

Similarly, a parent [Yusra] stated, “there are few classrooms... my daughter is studying with 28 students in her classroom. They need more classrooms and professional teachers.” This suggests that the provision of additional classrooms may help reduce class sizes so that teachers can have

more time to give individual attention to students. This view is reiterated by another parent [Yasser] who claimed “too many students in one class cannot benefit when deaf students are included full time. More teachers and more classrooms then teachers can look after individual students.” One other teacher [Mr Ebrahim] said:

We have two different classes with different level of deaf students. Some have little speech and can hear little, so we need some resources to help those students to make the sound more efficiently (Mr Ebrahim).

A parent [Abdullah] observed that “it is best to define the target category that will have the most accurate resources.”

4.2.7.2 Effective and continuous communication

In order to create a positive atmosphere for full participation of students who are deaf or hard of hearing in inclusive schools, participants in this study mentioned the “need for strong collaboration between special education teachers and general education teachers” [Mrs Shatha]. It is believed that when special and general educators collaborate effectively, it would help reduce stress on teachers who might not have specialised skills to support students in the area of speech and language difficulties. Another teacher [Mrs Hannan] suggested, “if there is respect for one another, then we can work well and improve the students’ learning.” Parents spoke mostly about strong connection between teachers and families. For instance, Fatema, a parent, said, “If teachers communicate with all families and take their opinions into consideration it will be the first positive step to full participation.” This perspective is supported by another parent who explained that “there is an effort made by the school to connect with parents at home. If this is continued well it can help to improve the experience of the students and parents” [Yasser].

Student participants also made comments about the role of communication in facilitating acceptance and full participation in the inclusive schools. In particular, they perceive teachers as key to communicating about their disabilities to their peers without disabilities which will eventually increase acceptance in the inclusive schools. For example, Nasser said, “teachers can teach and communicate to other students about us so they don’t laugh when we do things.” In Samera’s view, “teaching other children about the ways deaf or hard of hearing students communicate can help increase understanding and acceptance” in inclusive schools.

4.2.7.3 Support from the whole school community

Inclusive education thrives on the whole school community. This was recognised as a key facilitator by the participants in this study. For instance, Mrs Nadia expressed as follows, “parents’ collaboration with teachers and support from school principals are key to this programme.” Another teacher [Mrs Hannan] supported this view, “it is important to have an understanding leader and a conscious teacher who can collaborate. We also need parents to support us.” In fact, the teachers recognised that full participation in inclusive school is not the responsibility of one professional but the whole school community.

I would like school administrators to consider assigning this category to Special education teachers of the deaf. The general education teachers can support special education teachers but the main responsibility should not be on us [Mr Ebrahim].

Mrs Hannan recognises “the importance of the student’s family in making full participation effective.” Generally, participants situate students’ right to public education as part of being full members of society. Parents also support the idea of collaboration to enhance full participation of their children in inclusive

schools. For instance, Jumana, one of the parents suggests that “the school systems need to be flexible to accommodate parents’ participation in the educational environment.” Another parent [Abeer] expressed that “acceptance of parents to be part of the school is the demand on teachers, other education workers, and their positive interaction is important.” This was echoed by one of the teachers [Mr Ebrahim] who stated that,

families are important, they need to accept the placement of special education student in the public education and their interaction with a positive image of the school teachers can make this work better.

Most of the parents expressed willingness to be part of the educational process and support their children with special education needs when they are included in the inclusive schools. For instance, Abeer expressed as follows, “I can support the child by developing his or her self-confidence.” Another parent, Abdullah, stated that it is the personal efforts of the parents that help the process of education.

Other parents believed in home support by “standing beside their children, advising them and boosting their morale” [Jumana], “providing support for activities and teaching about good behaviour and kindness” [Yusra]. One interesting point to highlight in this finding is parents’ belief that their increased participation and support for their children’s full participation depend on “cooperative work between school and family” [Fatema].

4.2.7.4 Increased therapy sessions

Two out of the four parents spoke about the unique needs of their deaf children which require the provision of more speech therapy sessions. One parent [Abdullah] said that full participation is possible “by providing all the

means, specialists, continuous therapy in speech and communication". This perspective was supported by Jumana, a parent who said:

I hope the schools increase the number of sessions of speech and communication and the multiplicity of specialists of hearing impairment and speech and communication because these are limited in the schools.

Overall, the findings in this sub-theme indicated that only a few parents identified increased therapy as facilitator of effective practice of full participation that they thought might be beneficial for students with poor hearing and speech conditions. None of the teachers mentioned this in their interviews.

4.2.7.5 Professional knowledge

Knowledge of inclusive teaching featured as a prominent facilitator in promoting full participation of students with special needs in most teachers' comments. Mr Ahmed, one of the teachers, said:

I was prepared as a teacher for hearing impaired students through courses and exercises that guide me to know how to deal with these students and integrate them into general education classes.

Mr Omar expressed similarly, "I [was] ready for full participation because I am trained in this kind of education. But we need more technology to make the teaching and learning easier for the teachers and students." This suggests that training alone is not the issue but the tools to work with the knowledge acquired is equally important.

The teacher participants recognised the importance of training, particularly for general education teachers. They believed that this is necessary to bring them in line with the students they teach. This is emphasised by one of the teachers:

Intensification of courses and training in the teaching methods for general education teachers who teach the hearing impaired, especially the importance of means, as well as not going fast during the explanation the lessons. Also, it is important to be patient for students and speak aloud and clearly [Mrs Nadia].

The position of training was reinforced by another teacher [Mrs Tahani] who said:

You see, training is important. Training on new methods of teaching and how to develop appropriate resources. That is by learning how to respond to students' learning needs and how to teach them and by using the special methods that we learned based on inclusion.

Teachers observed that all teachers need to seek professional knowledge on deafness and how to teach them first, and secondly, how to source and develop materials and use educational technology. They believed that “the presence of specialised teachers who are ready for deaf education” can help improve full participation [Mrs Shatha]. Important also, “is the cooperation of school supervision and support for teachers to relieve stress and workloads on the teacher of deaf or hard of hearing students” [Mrs Tahani]. Unfortunately, some of the teachers claimed they were trained as general education teachers and then asked to teach students with disability. Mrs Shatha recounted, “there is no preparation for the students we are asked to teach. I think better training on aspects that we can support special education teachers is important. We need the practical skills to enhance their learning.” Teachers who specialised in deaf education expressed confidence in supporting deaf students' participation in inclusive schools.

Mr Ebrahim stated, “I am confident to teach because I got (BA) in hearing impairment and in addition to the training and workshops in the field of deaf

specialization throughout the academic year.” Another teacher [Mr Basher] claimed that “by attending training courses translator of lessons in sign language they can improve their professional knowledge.” In addition to training, a parent [Fatema] believed that “the inclusive schools need reform, more support for schools and teachers need to be trained well.” Another parent [Yasser] indicated that it is important to “develop the teaching staff and special teaching aids for hearing impairment and how to use visual education in supporting explanations so that students can understand the lesson.”

4.2.7.6 Positive attitudes

Generally, teachers expressed positive attitudes concerning full participation in inclusive schools. Mr Ahmed indicated, “I think it's great if done properly with support from government and community, I mean parents.” Another teacher [Mrs Hannan] said, “I like the idea but...there must be a concerted effort on the ground and to apply what is written in the policy documents.” Full participation is also seen as a good philosophy because “it empowers deaf students...it is necessary and important because their full presence in the integration classes help them to adapt and co-exist” [Mrs Shatha]. Addressing the issue of relevance, Mr Ebrahim elaborates on full participation:

The reason is I support this idea is that full participation increases the student's linguistic output by interacting with peers in general classrooms and this helps the development of pronunciation and fluency in speech.

Mr Ahmed observed that what can make it easier for students with hearing disabilities to participate fully is “the teacher's willingness to integrate students into general education classes. I think when teachers are positive about the students they can develop appropriate methods to teach them.” Some of the

parents also expressed strong positive attitudes towards their children's full participation in inclusive schools. For instance, Abeer specified, "We are in favour of all schools being ready for integration because transportation throughout their studies is very tiring even though the public school is adjacent to their home... I would like all schools to have integration and available special education teachers to set up a session for communication." Another parent [Yasser] offer support for full participation with the condition that "teachers and materials available to support the development of students by focusing on their needs."

4.2.7.7 A need for specialist provision and training

Most participants mentioned specialist provision as an important facilitator of full participation. We only offer individual sessions in the absence of the teacher. Mrs Nadia, a teacher claimed that "hearing impaired students still need pronunciation training in inclusive schools but there are no pronunciation sessions. I think this is a right of students to quality education." In this regard, Mrs Hannan, another teacher suggested that "by providing courses and training on the characteristics and of each disability and how to deliver the information to students," it is possible to implement full participation. A similar point was raised by another teacher, Mrs Shatha who said, "training in curriculum modification is also important for meeting the abilities of this category of students." The nature of specialist provision was elaborated on by another teacher [Mr Ebrahim]:

I strongly agree for students who are hard of hearing with condition that they receive daily pronunciation sessions and that the general education teacher is provided with appropriate training that enable him to know the abilities of students who are hard of hearing and to know the best way to teach them.

Similarly, Mr Basher said, “these students will benefit from available teaching aids and sign language but this is conditional on available special educators to support general education teachers who attend deaf and hearing-impaired training courses in sign language.” Parents also expressed similar ideas concerning specialist provisions:

My opinion is that all special schools are transformed into schools that integrate students with special needs and distribute specialist teachers in all schools to change the society's perception and to make children with special needs able to learn with their brothers, relatives and friends without long distance from their homes [Abeer].

Another parent [Abdullah] emphasised that “attention and provision of all that helps the student in the process of learning from specialists and teachers shadow and educational means should be given.” This is in line with a parent’s call for teachers who have “proficiency in all students who are deaf or hard of hearing and how to use sign language to increase the students’ vocabulary” [Fatema]. Generally, it is believed that by “developing the teaching staff and the special teaching aids for hearing impairment and relying on the visual education that focus on pronunciation rather than the presentation of information” deaf or hard of hearing students can make progress in inclusive classrooms.

4.3 Summary of the Chapter

In this second part of the qualitative data presentation, the participants’ conceptualisations of inclusion, full participation and inclusive teaching have been presented. Generally, all the parents and teachers in this research referred to inclusion as integration. On the other hand, the students expressed counter-narratives of inclusive schools as places they can see different students and make friends. The findings showed that participants have different

definitions of inclusive teaching. Generally, teachers were of the view that inclusive teaching connoted different methods with an example being active teaching.

Secondly, teachers, parents and students identified several pragmatic issues of full participation. The participants generally have mixed perspectives about including students who are deaf or hard of hearing in inclusive schools full time. Some participants felt that it's problematic because deaf or hard of hearing students were making social progress through friendships but being held back academically. This has led to segregated and pull-out practices as indicated in the students' comments. Others shared positive perspectives and believed that with adequate resources and well-trained teachers full participation can be possible. This is of particular importance because some of the parents' experiences suggest that the majority of students who are deaf or hard of hearing were not making academic progress in inclusive classrooms full time. Despite this, some parents believed that when teachers developed their skills in the area of deaf education, it is possible that the needs of their students can be met.

Participants also identified barriers to full participation including, inadequate knowledge of the Saudi inclusive education policies, attitudes of some teachers, lack of adequate resources, particularly in the area of assistive technology for communication, inadequate teacher professional knowledge, shortage of special education teachers and pedagogical issues such as inability to adapt the curriculum for students who are deaf or hard of hearing. Students identified additional barriers such as self-pity, pull-out and corporal punishment inhibiting full participation. In view of these barriers, participants offered ideas about factors that can facilitate the implementation and practice of full

participation. These include the provision of specialised services, increased therapy sessions in speech and language training, training of teachers on how to adapt the curriculum, working together as a whole school community and effective and continuous communication.

In the next chapter, I will discuss and explore the implications of these findings and consider some strategies that could be developed and implemented to enhance full participation.

Chapter Five: Discussion of Findings

5.1 Introduction

The purpose of this study is to explore the current state of full participation of elementary school students (6-12 years) who are deaf or hard of hearing in inclusive schools and gain insights into the nature of the facilitators and barriers to their full participation. The findings are discussed through inclusive teaching approaches and Vygotsky's cultural-historical theoretical lenses. This study utilised mixed methods of qualitative and quantitative approaches, incorporating questionnaires and interviews. The intent was to capture perspectives of participants and the essence of their experiences by allowing them to rate their experiences on the questionnaire as well as listening, thinking, and letting them talk (Lichtman, 2013). The specific aims are to describe the major facilitators and barriers to the full participation of students who are deaf or hard of hearing in inclusive schools in Saudi Arabia.

These aims are the first step to identifying the specific practices that need improvement to increase access and participation in inclusive schools. If teachers and parents are supported to develop a clear understanding of the concept of full participation, and the facilitators and barriers they commonly face, they may be able to work together and design transformative approaches which can support more students who are deaf or hard of hearing in inclusive schools. The results of the study were used to answer the following research questions.

1. What are teachers' and parents' attitudes toward full participation of students who are deaf or hard of hearing in inclusive schools?

2. How do teachers understand the concept of full participation and inclusive teaching?
3. How is full participation enacted in the inclusive schools?
4. What do teachers consider the facilitators and barriers to full participation of students who are deaf or hard of hearing in inclusive schools?
5. What do parents and deaf or hard of hearing students consider the facilitators and barriers to full participation in inclusive schools?

In the previous chapter, I presented the results obtained from the quantitative and qualitative methods. In the current chapter, the findings from the quantitative and qualitative findings are discussed jointly with respect to the specific research questions.

In all, 148 teachers completed the questionnaire, and eight teachers and six parents participated in telephone interviews. In addition five deaf or hard of hearing students were interviewed in face-to-face mode with the assistance of a sign language teacher. Participants' details are included in the methodology and data presentation sections of this thesis.

Generally, the combined results from the quantitative and qualitative data showed that the participants have positive attitudes toward the full participation of students who are deaf or hard of hearing in inclusive schools, however, their positive attitudes were based on the provision and availability of resources. The qualitative component of the study identified four major themes that describe the participants' conceptualisations, attitudes, practices, barriers and facilitators of full participation in inclusive school programmes. The conceptual themes were the following: (a) Concepts of inclusion, inclusive teaching and full

participation (b) Pragmatics of full participation (c) Barriers of full participation and (d) Facilitators of full participation.

5.2 Research Question One: What are teachers' and parents' attitudes toward full participation of students who are deaf or hard of hearing in inclusive schools?

The purpose of this question was to identify the nature of teachers', parents' and students' support for full participation. Attitudes are cognitive or psychological indicative systems that suggest how people feel or perceive an attitude object or phenomenon (Olson & Stone, 2005). Previous studies indicate that teachers who feel they are well supported develop positive attitudes toward inclusive education (Kraska, & Boyle, 2014; Mintz & Wyse, 2015). The findings indicate a combination of positive and negative attitudes of teachers towards the inclusion of students who are deaf or hard of hearing in inclusive elementary schools. The majority of teacher participants expressed support for the inclusion of students who are deaf or hard of hearing in regular schools because they believed these students would learn other skills from their peers without disabilities in inclusive classes. This resonates with Eriks-Brophy and Whittingham (2013)'s study in Canada who found similar favourable attitudes and support for inclusion of deaf or hard of hearing students. However, negative attitudes towards deaf students is predicated on the belief that not having an oral language makes a student unfit for learning in inclusive classrooms. Previous literature states that such thinking needs to be transformed to discover the potential of deaf students in inclusive classrooms (Roberson & Stevens, 2006). Anglin-Jaffe (2013); for example, found that deaf students have capabilities to be peer educators when they are not inhibited by oralist pedagogical orientations. Student participants also expressed that they

would like to have their education in the same class with their peers without disabilities because there is greater opportunity to make friends with students who are different. This is interesting as previous study found that providing opportunity for deaf or hard of hearing students to use their own preferred method of communication could help them learn together and improve their self-actualisation skills (Anglin-Jaffe, 2013). In terms of professional competence in teaching students who are deaf or hard of hearing in inclusive classes, the special education teachers were more positive than those with general education backgrounds because they felt they have the required skills to teach deaf or hard of hearing students.

Despite support for including students in the general education schools, teachers expressed negative attitudes to full participation by making reference to several factors to explain their perspectives. These include the lack of adequate knowledge of general education teachers to teach students who are deaf or hard of hearing, a lack of adequate resources in their schools to help them to teach, lack of knowledge in inclusive teaching, and lack of support from parents which are also found in previous studies (Agbenyega & Klibthong, 2014, 2015; Aldabas, 2015; Berlach & Chambers, 2011; Kigotho, 2016; Roberson & Stevens, 2006). Some based their negative attitudes on the notion that students who are deaf or hard of hearing cannot understand common lessons, and that the ideology of full participation in inclusive school is an imposition by school authorities with serious practical limitations as documented in other studies (Aldabas, 2015; Al-Mousa, 2010; Dare, Nowicki, & Felimban, 2017).

Slightly, more than half of the participants were not in favour of general education teachers being responsible for teaching deaf or hard of hearing

students. Some teachers rejected the idea of full participation in inclusive schools because of behavioural concerns of deaf and hard of hearing students in inclusive classrooms and lack of adequate support for teachers. More than half of the teachers also felt that inclusive education of students who are deaf or hard of hearing will reduce the academic standard for other students and most of the teachers thought that their workload has increased because of inclusion with others suggesting that it is difficult to give equal attention to all students in an inclusive classroom when deaf or hard of hearing students are included.

Generally, the results pertaining to this question showed that the majority of the teacher participants and some parents were not in favour of full participation. Parents in particular who did not favour full inclusion or full participation in inclusive schools claimed that their deaf students were included in a large group of other students without the provision of adequate support to meet their respective learning styles and needs. These parents preferred partial inclusion where their children who are deaf could be pulled-out into smaller groups with the view that their needs will be better served. These findings reinforce similar concerns that were identified in other studies with regards to the inclusive education of deaf or hard of hearing students (Brebner et al., 2016; Dalton, 2011). The teachers who expressed negative attitudes toward the full participation of deaf or hard of hearing students in inclusive schools claimed that full participation produced negative outcomes for students' learning because the learning environment did not support everyone. This suggests that those teachers focused narrowly on the students' inability to hear and speak orally as objects of limitation. Anglin-Jaffe (2011) argued for

the need to broaden our conceptions of what constitutes a rich language environment as this has practical implications for how we support the

language development of children, particularly those who experience additional barriers to language acquisition (p. 32).

According to Vygotsky's cultural-historical theory, concentrating on individual impairment often leads to isolated educational practices. From a cultural-historical perspective, it is the social milieu that limits students' participation in inclusive schools and not their individual disabilities. Therefore, Vygotsky recommended that transforming social attitudes should be one of the priority issues for inclusive educators (Gindis, 2003).

Student participants who expressed negative sentiments about full participation based their reasons on peer-victimisation. This again demonstrates how disability per se, according to Vygotsky (1993), is not the problem, but how members within a particular cultural community view and assign meaning to disability in a contradictory and alienating manner (Anglin-Jaffe, 2013).

In this study, few teachers and parents who have expressed positive attitudes to inclusion and full participation indicated that full participation has the potential to reduce student isolation, enable their social networking among students, improve their academic skills to the maximum as well as prepare them to better co-exist with other people in society who do not have hearing difficulties. This is echoed by previous literature that providing opportunity for social interaction in inclusive schools prepares students for life in their society (Rabinsky, 2013). However, their positive attitudes to inclusion and full participation were conditional on the availability of human and material resources and support from school leaders and parents. Although resources matter, Vygotsky (1993), for example, emphasised that the first approach to meeting the educational needs of every student is to transform teaching methods. Vygotsky's position is consistent with what Saloviita (2018) found that

knowledge and resources alone do not deliver quality inclusive practice outcomes but how teachers are able to transform their daily actions in the teaching and learning process to use these resources is what is most important.

Some of the teacher participants' positive attitude to inclusion and full participation of students who are deaf or hard of hearing was based on charity and pity view (Anglin-Jaffe, 2013; Retief & Letšosa, 2018) claiming that it is important to pay more attention to full participation and look at these children with mercy and not throw them into general schools without the slightest benefit. The idea of defectology and humanitarianism has been challenged with the rights-based approach to inclusive education (Dixon & Verenikina, 2007; Gindis, 2003; Vygotsky, 1993). The charity and pity model agrees with the medical model which considers the individual with disability as having deficits that need to be fixed (Retief & Letšosa, 2018). Inclusion and full participation is not synonymous to charity, but a fundamental human right for all students with a difference to enjoy inclusive, equitable and quality education (Ainscow, Beresford, Harris, Hopkins, Southworth, & West, 2016; Varcoe & Boyle, 2014). In this sense, all teachers have human rights obligations for actualising equitable education which has justice and equal rights as its fundamental principles (Saloviita, 2018). Human rights in Saudi Arabia is located in the principles and teachings of Islam. For example, one basic tenet in the value system of Islam is the principle of equity. Islam teaches that Allah the Almighty, created all people equal but with different abilities and dispositions (Qur'an 49). In this sense, negative attitudes have to be understood, worked on and transformed to enable the pragmatics of inclusion and full participation of students who are deaf or hard of hearing to be realised.

These findings resonate with literature investigating human behaviours and attitudes. Behaviours or experiences within inclusive schools can cause teachers to change or reinforce their pre-existing attitudes (Chiner, Cardona & Gómez, 2015). Usually, teachers prefer harmonious school working environment or environment that does not challenge them too much and require them to develop new pedagogical practices (Mitchell, 2018). Inclusive education and full participation is a process without a fixed harmonious practice. Inclusive education that leads to the full participation of students who are deaf or hard of hearing is a complex educational practice that challenges teachers' and parents' attitudes, beliefs and behaviours (Slee, 2018). For its very nature of challenging the status quo producing dissonance, teachers may experience psychological discomfort that can drive their negative attitudes (López-Torrijo & Mengual-Andrés, 2015). In this study for example, teachers associated their discomfort to the behaviour of students who are deaf or hard of hearing, their workload and the time they have to spend catering to the needs of all students in inclusive classrooms. Research evidence suggests that teacher discomfort regarding inclusive education or the idea of full participation can lead to lowering their motivation and reduce efforts to improve practice (Slee, 2018). In other cases, where teachers found inclusion or full participation to be too difficult to implement as a result of lack of certain skills, resources and support from the whole school inclusive school community, they would irrevocably change their attitudes back to their traditional practices (Sánchez, de Haro Rodríguez, & Maldonado Martínez, 2019). This was evident during teacher, student and parent interviews which revealed that teachers resorted to pull-out practices due to their inability to teach students who are deaf or hard of hearing together. Consequently, they disregarded information that supports new ways of

practice and maintains their negative attitudes towards students who are deaf or hard of hearing as difficult to teach in one classrooms with those without disabilities (de Boer, Pijl, & Minnaert, 2011).

Second, teachers' and parents' positive attitude to the education of students who are deaf or hard of hearing relates to satisfaction of pragmatic outcomes in terms of their expectations (Saloviita, 2018). There is evidence that good perceived performance and outcomes in students' achievement in an inclusive classroom can raise expectations for future practice, which in turn can have a positive impact on their support for inclusion and full participation (Sánchez, de Haro Rodríguez, & Maldonado Martínez, 2019). In this way, better training and information provision on inclusive education and full participation and support for parents and teachers can lead to higher expectations and positive attitudes (López Torrijo & Mengual-Andrés, 2015). It appears that the parents and teachers in this study were not fully informed about the concept of inclusive education and full participation. Feeling informed would enable the teachers and parents to understand the complexity of full participation in inclusive schools and the relationship between their expectations and satisfaction. It is possible that this can provide direction for the development of new attitudes that support full participation for inclusive education.

Theoretically, the findings related to this research question reinforced Vygotsky's cultural-historical theory that attitudes to inclusive education are contingent upon the social practices in which the inclusive education is organised (Chapman & Dammeyer, 2016). It shows that existing attitudes to the education of students who are deaf or hard of hearing that that they are better off in special education contained classrooms have barely changed as discovered by previous Saudi inclusive researchers (Al-Mousa, 2010; Alquraini,

2011, 2014; Aseery, 2016; AlSharani, 2014). The historical in the cultural-historical theory thus explains how successive generations of teachers have found it difficult to change without transforming the environment in which education and social practices take place (Smidt, 2009). Saudi Arabia is an Islamic state and educational policies, beliefs and values are based on Islamic religious culture and dogma (Marghalani, 2018). A key implication identified in this study pertaining to the cultural-historical theory is how the notion of equality in the Islamic religion that, Allah created all people equal (Marghalani, 2018), can be harnessed into recognising the interactivity between culture, history and school environment in any attempt to change teachers' and parents' attitudes toward inclusive education and full participation (Harris, 2008). For example, the attitude of perceiving students who are deaf or hard of hearing as handicapped because they lacked oral language is in need of urgent transformation. According to Smidt (2009), cultural practices both at home and school produce experiences that can affect attitudes to cling to the past or make transformative moves in one's behaviours into the future. Full participation in inclusive schools from the cultural-historical standpoint is a mediate educational process (Chapman & Dammeyer, 2017). It can be argued however, that negative attitudes toward students who are deaf or hard of hearing, or ideologies that construct them as defective and thus unable to be included in inclusive schools full time can limit teachers' ability to mediate the learning process (Stevenson, Kreppner, Pimperton, Worsfold, & Kennedy, 2015). Vygotsky claimed that mediating practices can facilitate full participation in inclusive education as it allows teachers and parents to create new relations between the stimulus and the response in a learning situation (Vygotsky, 1997). An implication that can be glean from the findings pertaining to negative attitudes is that when teachers

begin to view all students positively and focus on their potentials rather than on their limitations, they will be able to create new relations within inclusive classrooms to teach them to be successful (Chapman & Dammeyer, 2017).

The theoretical framing of this thesis again deepened understanding of how teachers' and parents negative attitudes toward full participation can limit social interaction, which according to Vygotsky, is essential for full participation in inclusive schools (Vygotsky's, 1978). Negative attitudes may prevent teachers from supporting students who are deaf or hard of hearing to develop on the social plane (Bodrova & Leong, 2007; Flear, 2010). Social interaction the interaction between a child and the adult who is more competent to guide the child to build knowledge repertoire so that they can engage with and make sense of their world. Bodrova and Leong (2007), that it is through social interaction that children learn with, from and about each other as well as internalise their cultural modes of life. Therefore, teachers' and parents' attitudes in Saudi Arabia pertaining to inclusive education needs serious attention. Saloviita (2018), observes that the implementation of inclusive education is a challenge and that the availability of resources, such as knowledge or support, alone cannot determine quality inclusive outcomes but how teachers transform their thinking about their practice to use these resources to attain an unwavering goal is what will deliver results.

5.3 Research Question Two: How do teachers and parents understand the concept of full participation and inclusive teaching?

This question was framed to help unpack participants' views about what they were trying to implement as full participation in the inclusive elementary schools in Saudi Arabia. Research found that perceptions of the ways people

conceptualise a particular phenomenon are related to their attitudes (Avramidis & Norwich, 2002; Boyle, Topping, & Jindal-Snape, 2013; de Boer, Pijl, & Minnaert, 2011). While support for inclusive education is on the increase (Boyle, Topping, & Jindal-Snape, 2013; Florian & Spratt, 2013), the concepts of inclusive education and full participation can be difficult to understand and implement effectively (Saloviita, 2018). Conceptualisations can be understood as a process of assigning meaning or deeper interpretation of things or phenomenon (Boston-Kemple, 2012). Meanings of inclusion carry with them actions, and how an individual teacher assigns meaning to full participation and inclusive education will eventually determine practice. In this study, the findings indicate that the conceptualisations of inclusive education and full participation was seen both as a value and a challenge, and a broad range of risk factors have been associated with the participants' conceptualisations which were discussed under research question four.

5.3.1 *Conceptualising inclusion*

The majority of the teachers and parents alike conceptualised inclusive education as integration. Loreman, Deppeler and Harvey (2005) defined integration as “involving children with diverse abilities into the existing classes and structures within a school” (p. 2). The aim of integration is to normalise to help students fit into pre-existing practices of schooling. They indicated that inclusion is the social and cognitive integration of students with special needs into regular schools and catering to their interest. On the one hand, teachers referred to cognitive integration as offering opportunities to students who are deaf or hard of hearing to learn alongside other students without disabilities. On the other hand, they explained social integration as the relationship that students who are deaf or hard of hearing build with their peers without

disability. Some other teachers referred to inclusive education as the education for all students, whereby students with special needs are sent to public schools. Yet, other teachers explained that inclusion is the act of combining '*special needs children*' with '*ordinary people*' (Term used by participants) in one school. Again, others were of the view that in inclusive schools, there are provisions of special services to meet the needs of special needs children. The terms special needs children and ordinary people as used by the participants further suggest elements of cultural prejudices against persons with disability in Saudi Arabia. In some cases the distinction is made with the use words such as normal and special need children (Aldabas, 2015; Alothman, 2014).

Parents' definitions of inclusion were similar to those of the teachers. Most parents regarded inclusive education as providing access to their children who are deaf or hard of hearing to attend public schools. Others perceived inclusive schools as schools with different teachers who can respond to all "cases of children". These multiple perspectives of inclusion suggest that both the parents and teachers have some understanding of inclusion but need further support to help them deepen these concepts. Boston-Kemple (2012) argues that "as we search for the meaning of things, there needs to also be relevance" (p.108). Indeed, teachers and parents in this research may see the relevance of inclusive education and full participation in the ways they assigned meaning to these terms. Previous literature (Bobzien et al., 2013; Mintz & Wyse, 2015) indicated that inclusion is a complicated term without a definite or single definition. Although researchers and practitioners differ in their definitions of inclusion, it is not in the interest of the inclusive education movement to settle for integration as inclusion. A clear delineation for inclusive practice and full participation can help teachers not only have a unified vision for an inclusive

school but can guide teachers to engage in a collective and effective practice (Loreman, Deppeler, & Harvey, 2010).

A search for clear meaning of inclusive practice and its related practices within the Saudi context may lead to established school policies, plans and inclusive teaching (Boston-Kemple, 2012) because, meanings and practices are inextricably linked. There is the need therefore for deepening the meaning of inclusive education and full participation with these teachers pertaining to their context of practice. Studies confirmed that deeper conceptualisations of inclusivity help teachers in planning and delivering inclusive teaching to benefit all students (Bobzien et al., 2013; Mintz & Wyse, 2015). In this study, the findings showed that the ways the teacher participants described the concept of inclusion as integration were connected to their practices exemplified in pull out and segregation into separate classes.

On the one hand, integration in education symbolises the incorporation into a school or classroom individuals with special education needs without the necessary support and adaptations necessary for the student to function to their maximum (UNESCO,1994). Research findings showed that in integration educational contexts school values, beliefs and practices hardly change and students with special needs are expected to fit into existing educational practices (Slee, 2018). Integration is loaded with deficit conceptions which construct students as having problems that must be fixed before they can fully participate in all school activities (Boyle, Topping, & Jindal-Snape, 2013; de Boer, Pijl, & Minnaert, 2011). On the contrary, inclusive education is built on the rights of every student irrespective of their circumstances, to have the same rights to education, access resources and make choices as everyone else in the

school's community (Ainscow et al., 2016). Effective inclusion models would conceptualise every child as a successful learner and that children are different in their choices, needs, aspirations and the ways they learn (Florian, 2015).

In view of the findings of this study, there is a need for a conceptual shift from integration to inclusion and careful attention must be paid to the arbitrary use of integration to mean inclusion, distorting meanings can lead to distortion in the practice of inclusion (Loreman & Deppeler, 2005; Rodriguez & Garro-Gil, 2015). By framing inclusive education a particular place or setting can lead to a process of transformation in which every student is considered a capable learner when the appropriate support is provided no matter where the student learns.

The implication emerging from this finding is that teachers and parents of students who are deaf or hard of hearing who understand these differences can help advocate for an inclusive learning environment and transform their practices that will help all children learn. In this sense, assisting Saudi elementary teachers and parents to understand the difference between integration and inclusion, it may to a great extent, lead to respecting diversity and differences among students who are deaf or hard of hearing, while ensuring participation and providing a high quality education for all children (Sánchez, de Haro Rodríguez, & Maldonado Martínez, 2019).

5.3.2 *Making meaning of full participation*

The findings identified two main ideas concerning the meanings the participants assigned to full participation. First, full participation was seen as students' involvement in school and outside of school activities. In their explanation of this concept, the teachers were of the view that full participation

of students with special needs involved engaging them in all curricula and extra-curricular activities which all students of general schools are doing without separating the students. Second, full participation was conceptualised by the teacher participants as the act of preparing students for practical life to be useful in society. This is another important conceptualisation identified in relation to full participation where participants not only associated the concept to classroom learning but also to practical life after school.

However, the findings from student interviews indicated that students who are deaf or hard of hearing were most of the time separated from their peers without disabilities during lessons into separate classrooms. This demonstrates that teachers' practices are inconsistent with the views they expressed about full participation. Indeed, the resolution of dissonance between definitions and practices involves the reconstruction of current values, beliefs and knowledge of full participation in ways consistent with inclusive philosophy (Ainscow, 2007; Jorgeson & Lambert, 2012). This was mentioned by some of the teachers. For example, teachers indicated that it is their responsibility to adjust the work for students who cannot do the same activities and empower them to experience full participation in inclusive schools. It is possible that the segregation of students into separate classes are impacted by professional barriers of inadequate knowledge to teach students who are deaf or hard of hearing and resource issues. While teachers have a crucial role in full participation, for example, making adjustments for students, they also need to be adequately supported to improve their professional capabilities (Florian, 2010).

Generally, parents struggle to explain the concept of full participation. Two parents who shared some ideas related to this concept explained full participation as the act of identifying resources to support students to do their

classroom and out of school activities. They describe this as a process of giving the students with hearing impairment their natural rights to learn. These conceptions are in part consistent with the literature which argues that quality inclusive education must consider full participation of all students as a core aspect of inclusion (Berlach & Chambers, 2011; Florian, 2010). Studies confirmed that negative attitudes and lack of support for teachers are barriers to full participation (Armstrong et al., 2011; Booth & Ainscow, 2011; Genova, 2015; Graham & Spandagou, 2011; Kliwer, 1998; Low, Lee, & Ahmad, 2018; Petriwskyj, 2010). Whereas a clear meaning of full participation provides some direction for identifying micro-exclusionary practices that challenge the full participation of students who are deaf or hard of hearing in inclusive schools (Florian, 2010), without adequate support for teachers, it is likely they will continue segregated practices which are inconsistent with their beliefs.

According to D'Alessio, (2011) micro-exclusion results from the misunderstanding that when students are physically present in general education classrooms then they are fully included. Failure to know students, their unique needs and their individual learning styles and preferences can lead to segregation in an inclusive setting. In reference to the cultural-historical theory of Vygotsky, mediation practices and programmes that enable children to build respectful relationships with their peers and teachers can help the full participation process (Bodrova & Leong, 2007). An implication that can be glean from this analysis is that supporting Saudi teachers to deepen their understanding of inclusive teaching might help them to implement quality teaching practices that support all students to learn in inclusive classrooms.

5.3.3 *Understanding inclusive teaching to transform practice*

Participants were asked to explain their understandings of inclusive teaching. Teachers generally conceptualised inclusive teaching as the act of employing a variety of modern teaching approaches with the support of technological resources. The majority of the teachers referred to inclusive teaching as methods of active teaching in the classroom. They explained that inclusive teachers use a variety of materials and draw on the expertise of special education teachers within the general school classrooms to create an opportunity for every student to do something that is useful to them. Some others referred to inclusive teaching as modern strategies of active learning where the teacher diversifies the delivery of information (Foreman & Arthur-Kelly, 2014; Chang, Anagnostopoulos, & Omae, 2011). In contrast to their conceptualisation of inclusive teaching teachers in this study perceived their pedagogical roles as directors who dictate to students what they should learn. These findings mirrored what Freire (Freire, 2000) referred to as the pedagogy of the oppressed where the student only receives, memorises, and repeats information without actively contributing to the knowledge production process.

Although the teachers acknowledged that the use of technology in inclusive teaching is vital for students' understanding, the role of students in the inclusive teaching and learning process was not discussed. Teachers mentioned strategies such as brainstorming, collaborative learning and the use of resources to support learners. They believed that special education teachers have superior roles in leading every pedagogical activity in the inclusive classroom because they have specialised skills in deaf education than general education teachers. Again, inclusive teaching was defined as total communicative processes such as communication in sign language, verbal

communication, and communication with gestures for educating students who are deaf or hard of hearing. Most of the teachers and parents did not express perspectives about the concept of inclusive teaching. Surprisingly, the teachers perceived inclusive teaching as something that is detached from them as teachers. They perceived inclusive teaching as something they do to students.

These findings with respect to the concept of inclusive teaching raised concerns similar to previous studies in Saudi Arabia which found that in view of limited understandings of inclusive teaching, teachers generally restricted the majority of students who are deaf or hard of hearing to self-contained classrooms (Al-Mousa, 2010; Alquraini, 2011, 2014; AlSharani, 2014; Ministry of Education, 2013). Similarly, Aseery's (2016) study in Saudi inclusive schools found that Saudi teachers are positive about inclusive education but were limited in their inclusive teaching capabilities to include and support all students to learn in inclusive classrooms.

Some studies found that understating the contextual meanings and practices of inclusive teaching can enable teachers to implement human-rights practices in the classroom to enact quality inclusive education (Florian, 2009, Florian & Spratt, 2013). Inclusive teaching and full participation are inextricably linked, empowering all students to have access to the general education curriculum (Florian, 2009, Florian & Spratt, 2013). This is possible when teachers believe in their own ability that they can make a change to every student's capacity to learn (Florian & Spratt, 2013). However, the results of this study suggest that teachers' conceptualisations of inclusive teaching deviate from the philosophy of inclusive teaching as a deliberate, purposeful teaching activity that dismantles the notion of a fixed ability (Spratt & Florian, 2014),

where every student is perceived as a transformable learner (Florian & Spratt, 2013).

The findings pertaining to this research question raise critical issues for consideration in terms of organising a comprehensive professional learning on inclusive teaching and full participation. In the pursuit of these interactive concepts for students who are deaf or hard of hearing it is important to form the notion of every student as an “active meaning-maker, who uses their personal and social resources to make sense of the world as they experience” teaching and learning with inclusive teachers and peers (Nind, Flewitt, & Theodorou, 2015, p. 342). Indeed, deeper conceptualisations of these concepts as they apply to their respective concepts may possibly help the teachers in planning and delivering inclusive teaching to benefit all students in the inclusive elementary schools in Saudi Arabia.

5.4 Research Question Three: How is full participation enacted in the inclusive schools?

5.4.1 Experiences related to practice

This question was asked to explore full participation practices and experiences in the Saudi elementary schools from the perspectives of teachers, students and parents. Information on the pragmatic aspects of full participation in inclusive schools is important for improving current practices. The teachers, students and parents shared various positive and negative experiences which demonstrate the complexity of implementing the concept of full participation for students who are deaf or hard of hearing. Regarding positive experiences, few teachers support the full participation of students who are deaf or hard of hearing to be fully included in inclusive schools. Those teachers who supported full participation indicated that their schools recorded impressive results, while

others made reference to little gains in their students' academic grades. Similarly, previous literature raised concerns regarding some inclusive schools not producing quality-learning outcomes for all students (Cara, 2013; Florian, 2014; Forlin et al., 2013; Graham & Jahnukainen, 2011; Göransson & Nilholm, 2014). Warnock (2005) of example gives priority to educating students where they can experience the highest potential for learning including feeling of belonging and well-being. In this study, few parents supported full participation claiming that their children had greater opportunity to socialise with students without disabilities and made friends, which contributed to their emotional wellbeing. Students who participated in this research were generally positive about the opportunity to meet and make friends with children who are different from them. In addition, three students also spoke favourably about their teachers as being caring and kind.

Despite these positive experiences, the majority of teachers and parents were not in favour of full participation because of their negative experiences. Parents, in particular, shared that their children were thrown into large classes in inclusive schools without skilled special educators or shadow teachers to support them. Parents indicated that the lack of specialised teachers resulted in minimal support to their children which led to lower academic achievements. Previous studies demonstrate similar concerns regarding inclusive schools and that many teachers have difficulty supporting all students in inclusive classrooms (Graham & Jahnukainen, 2011; Kreitz-Sandberg, 2015). All student participants claimed that they were educated in self-contained classrooms without the presence of other students. Although students had access to the play grounds and enjoyed meals together with their peers without disabilities, they were segregated during lessons.

The implication that can be gleaned from this finding is that the idea of inclusion or full participation functions as a conceptual axis around which different teaching strategies and experiences get entwined (Dixon & Verenikina, 2007). This draws concerns in that the semiotic uses, misuses, and iterations of the notion of inclusion and full participation may end up reinforcing traditional teaching practices leading to negative experiences for teachers, students and parents (Florian & Spratt, 2013). In addition, other parents added that their deaf or hard of hearing students generally struggle to comprehend materials or lessons because teachers who taught them had limited knowledge of deaf education and effective communication strategies. The findings further indicated that the majority of parents were not in favour of the notion of full participation in inclusive schools because the needs of their children were not adequately met in inclusive schools. They made reference to lack of care and attention to students who are deaf or hard of hearing, lack of academic progress, limited number of teachers who have skills to support students, and teachers' behaviour and the limited time they devoted to teaching their students in inclusive schools. Teachers who spoke against full participation blamed parents for their lack of interest in their children's education and their uncooperative attitudes. They claimed parents failed to understand the difficult nature of including students who are deaf or hard of hearing in inclusive schools, thus expecting quick results from teachers.

5.4.2 Deaf or hard of hearing students are unique

Findings of this study revealed that teachers and parents referred to students who are deaf or hard of hearing as unique individuals (Anglin-Jaffe, 2013a, 2015) who need specialised equipment and teachers with specialised skills before they can be educated in inclusive classrooms full time. One area

identified repeatedly in this study as requiring unique attention is communication and behaviour challenges, of students who are deaf or hard of hearing. Both teachers and parents believed that full participation and inclusion were not yielding results because of a lack of specialised professionals and services to support student communication and behaviours. Concerns about communication were also raised by students as mitigating against their ability to make friends and socialise with their peers who are not deaf or hard of hearing. Communication is a fundamental aspect of human social interaction (Eun, 2008). Communication is not only oral, yet students who are deaf or hard of hearing have been constructed as inferior because their communication styles differ from those of the oral dominated society (Anglin-Jaffe, 2015). It is argued that “human communication, in turn, is mainly carried out via the medium of language” (Eun, 2016, p. 127), which also includes sign language. Some researchers viewed language to be the most important and powerful among the symbolic tools available to humans to engage with one another in social practice such as education (Eun, 2008; Robbins, 2001). Thus, it can be understood how a language barrier challenged social interaction and the development of friendships within the inclusive schools between students who are deaf or hard of hearing and those who communicate by conventional methods.

5.4.3 Mixed feelings about full participation and inclusion

While the majority of participants felt that full participation can solve the problem of isolation and rejection, both parents and teachers did not favour full participation. Findings suggest that teachers and parents would like students who are deaf or hard of hearing to have some of their education in inclusive schools and the rest in special classes. Participants expressed disappointment

with the idea of full participation in inclusive schools because students who are deaf or hard of hearing were isolated from certain activities because there were limited resources to support their full participation. These findings were corroborated by student comments during the interviews suggesting that they were usually educated in a separate classroom where only those who are deaf or hard of hearing were present. The findings signal that inclusive education in Saudi Arabia is at a developing stage requiring grater support to help teachers transform their attitudes as well as injecting of more resources to improve inclusive practices. The findings are in contrast to Vygotsky's ideas which explained that "the core of Vygotsky's conception on inclusion is the belief that students with special needs be exposed to the same curricular challenges and opportunities as those offered to students without special needs" (Eun, 2016, p. 125). Vygotsky's call for providing students with special educational needs with the same opportunities within an inclusive environment as other students are based on his view of the importance of social interaction and collective experience where humans co-construct knowledge (John-Steiner & Mahn, 1996). In this sense, the emphasis is on the inter-relationships among learners, teachers, and the inclusive educational contexts in which their education takes place (Eun, 2016). According to Vygotsky (1978), physical and technical mediation (tools that enhance the interaction between individuals and environments), symbolic mediation (the use of signs such as language) and human mediations (support from other capable peers and adults) can help individuals with special educational needs to function to their maximum potential.

A previous study by Wilde and Avramidis (2011) who found that "the achievement of an inclusive education system is a major challenge facing

countries around the world” (p. 83). These authors identified that teachers struggle to teach all students in inclusive classrooms because of their deficit views about students’ ability (ibid, 2011). Connell (2013) argues that genuine education positions conceptions of inclusion centrally in the educational process, thus every effort must be mobilise to make inclusive schools the quality educational choice for all students.

In addition, teachers’ professional competence was found to be lacking in their practice which compounded the negative experiences of parents in particular. Both parents and teachers expressed support for full participation only if there is adequate provision of resources and fully trained as well as adequate supply of teachers who understand the education of deaf students. This implication for professional learning for teachers about how to create a healthy whole school community to enhance the full participation of students who are deaf or hard of hearing.

The findings also shed light on some issues regarding participants’ mixed feelings about full participation in inclusion. Parents who supported full participation felt that full participation in an inclusive school will help their students increase their educational outcomes. On the other hand, teachers who favoured inclusive education trusted their teaching skills as teachers for hearing impaired students who can educate them successfully. As previously identified teachers’ self-efficacy as most often leading to wiliness to practice inclusive education (Aiello et al., 2017). Although in a surprisingly short period of time, inclusive education has firmly spanned Saudi Arabian education and public discourse (Aldabas, 2015; Alothman, 2014; Alquraini, 2014), yet the findings of this study showed that full participation of students who are deaf or hard of hearing is yet to benefit from quality inclusive education. This is

because exclusion remains a real and present challenge in the schools researched due to the lack of in depth understanding of inclusion and inclusive teaching. The findings resonate with previous studies which showed that “narrow articulations are evident in how inclusion is allied with select categories of students (NSW Government, 2011, p. 2). Other researchers reiterate that “there is relatively little consistency about how issues of inclusion are understood and portrayed in policy within and across many national settings” (Hardy & Woodcock, 2015, p. 158).

It is possible to adopt inclusive education for all students with a disability or special needs in general education schools and support them with specialised services, particularly students who learn through sign language. In this regard, the argument by some participants in this study to send some students who are deaf to specialised educational settings as a way to provide for their needs can be reversed if adequate provisions are made and both teachers and parents are supported to work together and innovate teaching practices (Florian & Spratt, 2013).

The findings of this study further indicated that issues that threatened teachers’ practice experiences to deliver effective teaching in inclusive schools include workload issues and pressure on teachers to meet school demands, lack of curriculum flexibility, inappropriate learning environments and centralised administrative practices. It is argued that full participation in inclusive schools carries considerable inclusive teaching responsibility and skills that are not always taken into account in teacher training (Saloviita, 2018). By implication, the research “evidence suggested that an ‘inclusive’ culture (defined in terms of norms, values and common practices) produces an overall enhancement in ‘participation’ (Wilde & Avramidis, 2011, p. 86). It is possible

that Saudi elementary schools can work with researchers to create an inclusive culture and build a strong partnership with parents. When schools commit to the values of respect for difference and a commitment to offering all students access to learning opportunities, it is possible that learning will improve for all students.

5.5 Research question Four: What are the perspectives of parents and teachers regarding the Saudi inclusive education policies?

School-level inclusive policies can guide the whole school community in implementing effective inclusive education programmes to meet the needs of all students (Ainscow, 2007). Although the existence of policies is not in themselves enough to deliver outcomes, knowledge of key policies that guide inclusive education in a particular context is critically important (Hardy and Woodcock, 2015; Warnock, 2005). Teachers' and parents' knowledge of key school-level inclusive education can help them identify their co-educational roles and how to support every student to learn. They shared their experiences that although policies are important they were not able to explain their schools' inclusive policies. Some of the teachers refer to full or partial integration as their preferred approach to educating students who are deaf or hard of hearing. The teachers believed that there is a need for clear and specific policies to guide their inclusive practices to create the same opportunity enjoyed by other students without disability (Gunnþórsdóttir & Jóhannesson, 2014).

Parents' experiences were similar to those of the teachers in the sense that they were not able to articulate the inclusive education policies by the schools or those enacted by the Saudi government. However, the parents made strong policy suggestions indicating that inclusive policies must be created to increase the number of inclusive schools in Saudi Arabia so that more students

with special needs can go to their neighbourhood schools. Parents believed that it is the right of their children to have a good education without struggling to find one in their immediate communities.

5.6 Research question Five: What do teachers, parents and deaf or hard of hearing students consider the facilitators and barriers to full participation of students who are deaf or hard of hearing in inclusive schools?

Several barriers were identified in this study which are consequences of a range of factors, including the lack of participants' knowledge regarding the existence of clear policies on inclusive education, curriculum inflexibility, distance of inclusive schools from families, the skills and knowledge of the teacher workforce, particularly the general education teachers, inclusive teaching methods, attitudes to full participation and inclusion, as well as problems with resources and perceived lack of adequate special educators. In their combination these factors affected the implementation and practice of full participation concept for students who are deaf or hard of hearing in the Saudi elementary schools. There were several commonalities in the types of barriers teachers identified.

Inclusive teaching barriers relate to teacher's difficulty adapting the curriculum for all students, particularly students who are deaf or hard of hearing. This difficulty was associated with pressure on teachers to deliver practices according to the prescribed curriculum and the lack of support from school leaders that enable teachers to vary teaching approaches for some students. Some researchers identified similar barriers to inclusive practice by indicating that attempting to complete all curriculum requirements in a packed curriculum has resulted in a limited opportunity for some students to fully participate in inclusive classrooms (Sánchez, de Haro Rodríguez, & Maldonado Martínez,

2019). Most teachers in this study indicated that they do not have the ability to modify curriculum for students who are deaf or hard of hearing in inclusive programmes which led to the slow progress of some students. Consequently, during interviews, parents who felt their children were not benefiting from inclusive education expressed lack of confidence in some of the teachers' ability to effectively teach their deaf students. Vygotsky's view of inclusion is an act of positive differentiation in teaching and learning in which teachers respond to all students' individual needs (Kozulin & Gindis, 2007). It is argued that when teachers are supported to develop inclusive learning contexts and utilise inclusive teaching approaches, students with special educational needs have a better chance of improving their learning outcomes (Cara, 2013; Anglin-Jaffe, 2013). It also meant gradually dismantling barriers to participation and focusing on the diversity of individual strengths and needs in their respective inclusive learning contexts (Anglin-Jaffe, 2011; Graham & Jahnukainen, 2011; Kreitz-Sandberg, 2015).

Several researchers also argued in relation to the findings of this study by claiming that the ability to modify curriculum tasks for diverse students is an act of a transformative inclusive teaching that can enable access and full participation of all students in inclusive schools (Armstrong & Barton, 2008; Berlach & Chambers, 2011; Jordan, Glenn & McGhie-Richmond, 2010; Thomazet, 2009).

In this study, teachers' lack of professional knowledge in inclusive teaching was linked to traditional teaching methodologies. The majority of the teachers identified that inclusive teaching was not part of their training instead, the focus was on how to teach students who are deaf in separate classrooms. General education teachers, on the other hand, expressed low self-efficacy in

teaching deaf students. Florian (2010) for example, argued that teachers of inclusive classrooms must believe in their own ability that they have the skills and knowledge to teach all students. In this regard, Saudi Arabian elementary school teachers who teach students who are deaf or hard of hearing in inclusive schools must believe that every student's capacity to learn is transformable through effective inclusive teaching approaches (Florian & Spratt, 2013). This is possible when barriers confronting them such as attitudes of self-doubt, resource limitation and workload issues are minimised (Forlin & Chambers, 2011; Göransson & Nilholm, 2014). Indeed, this would require a whole school approach and strong distributive leadership (Agbenyega & Sharma, 2014).

The findings supported previous studies which found that many countries acknowledge within their education policies the willingness to establish inclusive education systems but teacher training and implementation of inclusion have not been able to match with the required skills and knowledge of an inclusive educator (Sánchez et al., 2019; Wilde, & Avramidis, 2011). In view of these findings there is a major cause for concern because teacher knowledge and inclusive teaching capabilities have been identified as barriers hindering inclusive practice and full participation in several studies and yet, these barriers continue to persist in even the school systems in most advanced economies (Berlach & Chambers, 2011; Florian, 2010). For instance, this study's findings reinvigorates the debate that though many countries have expanded access to quality education in inclusive schools, full participation of students with disabilities is a restricted educational opportunity for some students that are classified as difficult to teach (Armstrong et al., 2011; Booth & Ainscow, 2011; Genova, 2015; Graham & Spandagou, 2011; Kliwer, 1998; Low, Lee, & Ahmad, 2018; Petriwskyj, 2010). As educators strive to increase access and

participation in inclusive schools there is the need to continue to focus on education as a right and not as a privilege.

According to Vygotsky's cultural-historical theory framing this study, teachers often judge students with disabilities through their social, cultural and environmental lenses (Agbenyega, 2007; Mance & Edwards, 2012; Voltz, Brazil, & Ford, 2001). In this way, negative attitudes and practices that hinder full participation can be explained through these cultural-historical perspectives. The findings also identified the lack of respect and collaboration between special educators and general education teachers as inhibiting factors to the implementation of full participation of students in the inclusive schools. For instance, special educators felt they were better trained than the general education teachers in teaching deaf students. Some of them expressed that general education teachers should not teach deaf students because they were not specifically trained in deaf education.

The majority of the teachers believed that the concept of full participation and inclusion would yield social participation outcomes but lead to poor academic outcomes. In addition, some teachers were not happy with the full participation concept because of perceiving deaf students as difficult to teach, and pressure and high expectation from parents. In fact, the cultural-historical theory argues that a supportive school is like a community that believes in every student's potential to thrive in education (Merabet & Pascual-Leone, 2010). On the contrary, school communities that hold on to the idea of defectology construct persons with disabilities as having problems that have to be fixed by specialists before they can have quality education (Bottcher & Dammeyer, 2012; Smagorinsky, 2012; Vygotsky, 1997). Thus, teachers' identification of limited special education teachers as hindering full participation of students

who are deaf or hard of hearing is opposed to the view of what inclusion and full participation are all about. For example, in this study, some of the special education teachers believe that engaging non-special education teachers to teach deaf students is not a good practice because they do not have specialist skills in teaching communication such as sign language. They believe that such practices partly contributes to lack of student progress in inclusive programmes. This perceptive is opposed to the view expressed by Florian and Spratt (2013) that inclusive teaching is the responsibility of every teacher. Anglin-Jaffe (2013) also found that students who are deaf or hard of hearing have capabilities to conduct peer tutoring and learn from one another using sign language. This means, when the right climate, learning environment and ongoing full support are provided to students, they can all thrive academically irrespective of their backgrounds (Dalton, 2011; Florian, 2014; Spratt & Florian, 2014). Participants also mentioned the lack of access to adequate technological resources, for example, technological devices for communication as barriers to inclusion and full participation of deaf students. Previous studies found that most inclusive teachers use the resource issue as an excuse for the continuation of traditional teaching approaches (Agbenyega & Klibthong, 2014). Vygotsky (1993) argued that disability is a social construct in that people name disability and internalise it from their social, cultural, and historical practices (Agbenyega, 2007; Vygotsky, 1993). Thus, teachers who focus on the disability as a property of the student, often are unable to transform their teaching to meet the needs of the students with disability in inclusive classrooms (Agbenyega & Klibthong, 2014).

It can be argued that the growing interest in Saudi Arabia to make schools inclusive has created a major challenge in terms of the quality of teaching in inclusive schools to support students who are deaf to realise improved

educational outcomes (Al-Turkee, 2005). In view of these barriers, the implication is no longer about what is inclusion, and why we need it in Saudi Arabia for students who are deaf, instead how are we addressing the barriers to full participation that previous studies in Saudi Arabia identified which are similar to those identified by this study (Al-Mousa, 2010, Alothman, 2014; Alquraini, 2014).

5.6.1 Participants' perspectives of facilitators of inclusion and full participation

In this study, some key facilitators have been identified including the provision of resources, infrastructure, effective communication, professional knowledge, and support from the whole school community. Although the teachers agreed that their schools had some resources to support their practices, communication technologies were found to be inadequate for use by students who are deaf or hard of hearing. All the teachers believed that availability of resources will automatically lead to the full participation of students who are deaf or hard of hearing in inclusive schools. Infrastructural resources were related to congested classroom environments which limited many students' active participation. There was strong belief that more classrooms and more teachers can improve full participation. Parents indicated that increasing the number of inclusive schools in their neighbourhood communities can facilitate their children's access to inclusive schools.

Effective and continuous communication was another main facilitator identified for improving the practice of full participation in inclusive schools. They believed that full participation is in need of strong collaboration between special education teachers and general education teachers, which is foundational on effective communication and respect for one another. Parents

spoke about building strong bonds between teachers and families to enhance the practice of full participation of deaf or hard of hearing students in inclusion programmes.

In addition, support from the whole school community was seen as the best way to encourage all stakeholders to be part of the inclusive education agenda. In this sense, school administrators were seen as pivotal in making the full participation concept work in inclusive schools. Most parents expressed willingness to be part of the educational process and support their children with special education needs when they are included in the inclusive schools when they are respected by the school leaders and teachers.

Parents argued for increased therapy sessions in speech and communication to compensate for language difficulties of students who are deaf because of their unique learning needs. Indeed, this position can be questioned in terms of a cultural-historical understanding of inclusion. For example, Vygotsky claimed that deaf and hard of hearing “by itself does not make a student handicapped; it is not a defective condition, an inadequacy, abnormality, or illness...[hard of hearing] becomes these things only under certain social conditions of a...person’s existence” (Vygotsky, 1993, p. 84). By implication, viewing disability as a social phenomenon, parents and teachers can pave the way to question a “student’s social milieu, not the organic impairment per se” (Gindis, 1995, p. 79).

The students who participated in this study claimed that by educating their peers who are not deaf or hard hearing about disabilities they would desist from focusing on their biological difficulties to perceive them with positive attitudes, which may eventually reduce peer ridicule and victimisation. Gindis (1995) argued that a biological deterministic view focused on personal deficiencies

leading to clamouring for practices that isolate or exclude some individual students. In this perspective, calling only for special services as the only way to help students make gains in education is challenged by Vygotsky's (1983) position that "training of sharpness of hearing in a...person has natural limitations; compensation through the mightiness of the mind has virtually no limits" (as cited in Gindis, 1995).

Increasing the professional knowledge of teachers was considered by the participants as an important facilitator for the implementation of full participation in inclusive schools. Specifically, knowledge of inclusive teaching was highlighted by several previous researchers (Florian, 2010; Gunnþórsdóttir & Jóhannesson, 2014; Saloviita, 2018). In increasing the professional competency of teachers Vygotsky's (1993) contribution to inclusion becomes a critical consideration. The cultural-historical perspective of inclusive education and full participation explains that teachers' practice interact with culture, history, and social practices to shape what happens in inclusive classrooms and how that particular society view students with disabilities in general (Bottcher & Dammeyer, 2010; Vygotsky, 1993). Therefore, teacher professional learning to advance their skills for inclusion practice must recognise this powerful interplay between professional learning, culture and practice.

Finally, the findings identified positive attitudes towards students and parents including the need for specialist provision and training for teachers to enhance the implementation of full participation in inclusive elementary schools in Saudi Arabia. This indicates that in order to maintain participants' positive perspectives cultural values and school practices that have the power to shape attitudes must be analysed in relation to Saudi cultural practices (Skinner & Weisner, 2007). This is because, the cultural-historical theory reveals that the

meanings people ascribe to disability emanates from their cultural communities (Fleer, 2016; Kozulin, 1998; Smagorinsky, 2012; Wertsch & Sohmer, 1995). The argument can be made that the participants' believe that specialist provision can offer individual sessions for example, the need for pronunciation training for students who are deaf or hard of hearing in inclusive schools to learn better can only yield positive inclusive education outcomes when the special provision services do not isolate the individual deaf children but enable social interaction in using the resources of their schools' community (Danby, 2009). This is consistent with Anglin-Jaffe's (2013) finding that positive social interaction empowers individual students who are deaf or hard of hearing to peer-tutor themselves. To her, "actions as peer educators are framed as an act of resistance towards the oppression of their language and culture" (p. 261). This resonates with Freire's (2000) position of eliminating all forms of oppressive pedagogical barriers so that all students irrespective of their birth circumstances can learn in inclusive educational settings. By providing opportunity for all students to fully participate in inclusive educational settings without restrictions imposed on them on the basis of their disability is also an act of decolonising education and promoting educational equity (Anglin-Jaffe, 2015).

5.7 Summary of the Chapter

In this chapter, the major findings of the research have been discussed in relation to the research questions, previous literature and theory. It can be argued that full participation and inclusive teaching are rights-based concepts for ensuring equitable access to all curriculum areas as well as a process of making progress in education. The concept of inclusion, full participation and inclusive teaching appeared less understood by teachers and parents who

participated in this study. Referring to inclusion as integration is not only problematic, it led to practices that mirrored integration resulting in segregation and pull-outs. Students' comments corroborated the findings suggesting, their inclusive experiences were limited to social inclusion during meal and recreational times. To make inclusion and full participation a reality for students who are deaf or hard of hearing, a deeper conceptualisation of the concept is important. Also, the study identified several attitudinal, systemic, policy, and inclusive teaching barriers. The final chapter of this thesis will provide a summary of the thesis, the limitations and offer suggestions for improving the current practice of inclusion and full participation of students who are deaf or hard of hearing in Saudi elementary schools.

Chapter Six: Summary, Recommendations and Conclusion

6.1 Introduction

In the first chapter of this thesis, I introduced the research problem and context, purpose, significance and how the thesis is organised. The subsequent chapters were the literature review, theoretical and methodological discussions, and data collection approaches and analyses strategies. These activities subsequently, led to the research findings and discussion to answer the research questions. In this final chapter, I summarise the study's findings, implications and limitations, and provide some recommendations for improving inclusive education and full participation for students who are deaf or hard of hearing in Saudi elementary schools. Recommendations are also made for further research based on the findings.

6.2 Summary of the study

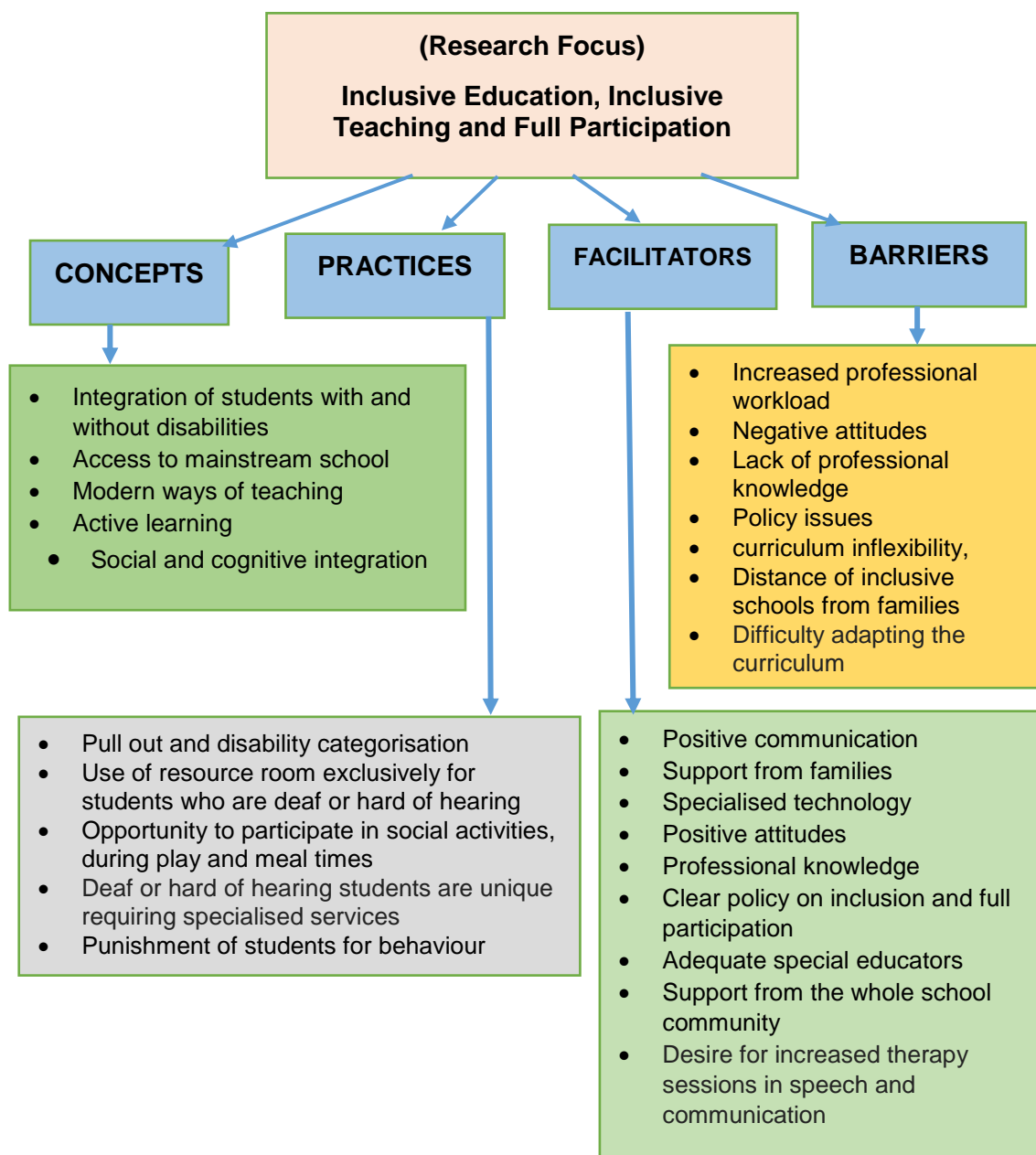
The main purpose of this study was to explore how Saudi inclusive elementary school teachers, parents and students who are deaf or hard of hearing conceptualise inclusive education, inclusive teaching and full participation. The study also sought to find out about full participation experiences and related facilitators and barriers to full participation of students who are deaf or hard of hearing in Saudi inclusive elementary schools. At the centre of this research are the voices of parents, teachers and students who are deaf or hard of hearing.

By utilising a pragmatic research paradigm, I implemented a mixed method approaches to collect quantitative and qualitative data. At the

quantitative stage, 66 teachers from Riyadh, the capital city of Saudi Arabia and 82 teachers from Jazan which is located in rural Saudi Arabia completed a 65-item questionnaire. The participants for the qualitative aspect of the study consisted of eight teachers, six parents, and five students who were purposively selected to participate in semi-structured interviews.

The use of Vygotsky's cultural-historical theory provided a framework for this research and helped in the discussion of the findings. In order to gain insights into the participants' conceptualisations, practices, and barriers and facilitators of inclusive education as well as inclusive teaching and full participation of students who are deaf or hard of hearing, a framework analysis approach developed by Braun and Clarke (2006) was utilised to analyse the qualitative data. Both the findings from the quantitative and qualitative findings have been integrated to provide a holistic understanding of the phenomenon under study. Figure 3 shows the summary of the key findings that emerged from the study.

Figure 3 Summary of key findings



As the research questions demonstrate, first, the study explored participants' ideas of inclusive education, inclusive teaching and full participation of students who are deaf or hard of hearing in Saudi elementary schools that are described as inclusive. The findings suggest that conceptualising inclusive education, inclusive teaching, and full participation is not a simple matter for the participants. Their conceptualisations demonstrate multiple perspectives in response to this aspect of the study. Key among participants' conceptualisations include describing inclusive education as social and cognitive integration of students with special needs into regular schools. Social integration was seen as allowing students who are deaf or hard of hearing to build social relations with their peers without disability. Others refer to inclusive education as providing access to mainstream education for students who are deaf or hard of hearing where they can utilise special services to meet their learning needs. Full participation and inclusive teaching are other important concepts explored in this study, however explaining these concepts is quite challenging for teachers and parents. Despite this difficulty, full participation was conceptualised as the involvement of students who are deaf or hard of hearing in regular schools and outside of school activities that prepare them for practical life in society. Inclusive teaching, to the participants, means the act of employing a variety of modern teaching approaches. The participants mentioned a variety of communication strategies and technological resources factors that can facilitate active teaching and learning in the classroom for students who are deaf or hard of hearing.

Secondly, the study provides more evidence on practice experiences of inclusive teaching and full participation. Specifically, it shows that students who are deaf or hard of hearing have some relationships and interactions with other

students without disabilities, during break and mealtimes. However, students were pulled out into separate classrooms and resource rooms during teaching and learning periods. This is somewhat understandable, considering that the participant's conceptualisation of inclusion appears to be inconsistent with the true meaning of inclusion. For example, the UNESCO (2015) Vision 2030 education document claims that inclusion and equity in and through education is the cornerstone of a transformative education agenda, and we therefore commit to addressing all forms of exclusion and marginalization, disparities and inequalities in access, participation and learning outcomes.

It is possible that a deeper understanding of inclusion as quality education for all could transform the participants' inclusive teaching practices. In addition, the findings show a combination of positive and negative attitudes towards the inclusion of students who are deaf or hard of hearing. While some teachers favour inclusion and full participation of students who are deaf or hard of hearing in Saudi inclusive elementary schools, others believe that these students would have a better education in special schools. Specifically, the special education teachers demonstrate more positive attitudes toward full participation and inclusion than the general education teachers do. In addition, all five students who participated prefer to have their education in inclusive schools and learn together with their peers without disabilities. Some of the special educators were not in favour of general education teachers teaching students who are deaf or hard of hearing. Teachers who were not in favour of the concept of full participation cited behavioural concerns of students who are deaf or hard of hearing and lack of adequate support from parents and teachers. Interestingly, some of the teachers believed that inclusive education and full participation concept could contribute to a reduction in the academic

standard of other students while other mentioned increased in workload for their challenge in practice of inclusion for students who are deaf or hard of hearing.

Further, while some parents support the idea of their deaf or hard of hearing children participation in general education classroom with their peers without disabilities, others felt that full inclusion or full participation in inclusive schools is not a good idea because of their children have special needs that require specialist provisions which could not be met in the general education classrooms. Specifically, they expressed discontent with the Saudi inclusive schools for including their children in large groups of students without the provision of adequate support to meet their individual needs. Consequently, some parents preferred partial inclusion and pull-out of students who are deaf or hard of hearing into smaller disability groupings.

Thirdly, the findings identified key barriers and facilitators. Some critical barriers associated with creating and implementing full participation include how teachers in the Saudi elementary schools which identified their schools as inclusive were still operating traditional segregation practices as usual and limiting the opportunities of students who are deaf or hard of hearing to learn with their peers without disabilities. The students who participated in this study expressed dislike for pull-out practices, however, they were powerless to decide the spaces of their own education. Other barriers identified include increased professional workload, negative attitudes of some teachers and parents towards inclusion and full participation and the lack of professional knowledge to support all students, particularly those who are deaf or hard of hearing. Further barriers were linked to the lack of a clear policy on inclusion, curriculum inflexibility, and distance of inclusive schools from families, and difficulty adapting the curriculum for students who are deaf or hard of hearing.

A closer look at the results of this study identify the following facilitators of inclusive education, inclusive teaching, and full participation of students who are deaf or hard of hearing. These are positive communication, support from families, specialised technological devices, positive attitudes from teachers and parents, scaling up professional knowledge in inclusive teaching, clear policy on inclusion and full participation, the provision of adequate special educators, support from the whole school community, and the desire for increased therapy sessions in speech and communication. These main findings of this research reiterate that the manner in which inclusive education, inclusive teaching, and full participation practices are accomplished will have immediate practical implications for all school teachers, families, students, and the entire elementary education system in Saudi Arabia. In this regard, the following implications and recommendations are made for improving the efficiency of a transformative inclusive elementary education with inclusive teaching and full participation as its cornerstone concepts.

6.3 Study implications and recommendations

6.3.1 Implication and recommendations - The role of school principals

First, this study draws significant implications for school principals. It is often difficult for teachers to progress in their pursuit in inclusive education if a strong leadership with an inclusive orientation does not support them (Agbenyega & Sharma, 2014; Timothy & Agbenyega, 2019). As this study identifies that full participation and inclusive teaching are not yet fully developed in the Saudi elementary schools that participated in this study, it is important that schools' principals assume strong leadership positions and enact policies and visions for their schools. These visions and inclusive programmes would need to adopt an open and consultative approach with parents and the whole

school community. Studies have argued that inclusive practices thrive when there is collaboration and collective thinking within the whole school community (Elder, Rood & Damiani, 2018, Flrian, 2014). When inclusive education, inclusive teaching, and full participation practices are situated within the whole school agenda, there is a greater sense of what is expected with more possibility for supporting the innovation (Sharma, Loreman & Forlin, 2012).

Second, in line with the ongoing complexity surrounding the participants' conceptualisations of inclusive education, inclusive teaching and full participation, and inadequate knowledge among teachers, it is important that professional learning to deepen teachers' understanding of these concepts, promote collaborate spaces that allow teacher voices to contribute to issues of inclusion. This means, promoting contextual discussions about nature and the manner in which inclusive education can be implemented in the Saudi context. Giving voice to teachers in their own professional learning can maximise their contributions including sharing expertise on existing practices and challenges. A recent study for example, by Timothy and Agbenyega (2019) found that teachers who were likely to disengage from participation in professional learning related to inclusion participated with a high-level of interest because their professional learning process was collaborative.

Thirdly, quality teaching that meets the learning needs of all students is the goal of inclusion. This study identified segregated practices on the basis of disability confirming that full participation in inclusive elementary schools in Saudi Arabia is a distant matter. In addition, several challenges were identified as implicating the implementation of inclusive teaching and full participation. This draws implication for a whole-school approach to developing clear guidelines for resourcing schools and teachers, as well as working with parents

to facilitate the inclusive development process (Sharma, Chambers, Deppeler, Loreman, & Forlin, 2014). For example, teachers who have difficulty differentiating curriculum and grasping the concept of implementing full participation and inclusive teaching can be supported by their school community by providing mentoring support.

6.3.2 Implication and recommendations - The role of teachers

This study also draws implications for teachers to take responsibility as inclusive teachers and make curriculum modifications that allow for full participation. However, this is only possible if the ad hoc manner in which students who are deaf or hard of hearing are allowed to participate with their peers without disabilities is critically rethought. As discussed theoretically in this research, Vygotsky's theory supports social interaction as a cornerstone of cognitive development (Vygotsky 1978). There is need therefore for developing the professional competency of teachers in regards to inclusive education and its core principles of equity and social justice. It is when teachers have clear knowledge and understanding of what they are expected to do, and how to approach the doing, that change is likely to occur in their professional practice (Sharma, Chambers, Deppeler, Loreman, & Forlin, 2014). This study also identifies positive communication and collaboration with parents as woefully lacking. Effective communication among teachers and between teachers and parents can lead to important information sharing on students, and how parents can be part of the whole school inclusive practice initiative.

Implication and recommendations - Students as capable learners

An inclusive vision that considers all students' learning as transformative is critical for enacting the practice of full participation. As the implementation and

practice of full participation challenged teachers in this study, it is important that teachers be provided opportunity to develop new values for students who are deaf or hard of hearing that centre on inclusive philosophy and inclusive teaching. The findings suggest that students who are deaf or hard of hearing found it difficult to make friends with students without disabilities as well as suffer from ridicules from their peers. Teachers in inclusive schools can use this as opportunities to educate students without disabilities about their peers with disabilities. Understanding the needs of students with disabilities by other students can increase their level of acceptance and support within inclusive schools (Klibthong & Agbenyega, 2018). As a pedagogical tool, inclusive teaching enables teachers to challenge their own professional practice and develop learning programmes that offer opportunities for participation (Elder, Rood, & Damiani, 2018). This means, incorporating values of pedagogy that perceive all students as active meaning-makers who have influence in their own education.

6.3.3 Implication and recommendations for involving parents

The findings of this study draw implications for parental collaboration and participation to support elementary schools to implement inclusion and full participation practices. In an effort to strengthen parents' support for inclusion and full participation, teachers need to establish positive and effective channels of communication with parents about their children's education. In addition, there needs to be clarity around the roles of parents as well as what teachers mean when they talk about inclusion and full participation. In this study, for example, teachers and parents ingeniously suggest ways to engage with each other including establishing positive communication strategies and making policies about inclusion clearer. Previous research, for example indicates that

because many parents lacked trust in schools it is necessary for schools to make connections with parents and relieve their fears of things that concern them with regard to inclusion (Fretwell, Osgood, O'Toole, & Tsouroufli, 2018).

6.3.4 *Linking practices to Saudi inclusive education goals*

While Chapter one of this thesis outlines some policy measures of the Saudi government towards catering to the needs of students with disability in mainstream schools or, in the least restrictive environments, the findings of the study show that the majority of participants were not aware of policies regarding inclusive education. This implies that the lack of awareness of relevant education policies on inclusion can affect the ways teachers develop and practise inclusion and full participation in Saudi Arabia. Therefore, it is recommended that school principals provide avenues for teachers to mutually discuss government policies on disability and inclusion. Being active in educational policy issues can motivate teachers to make policy contributions on inclusive education to their local school boards (Kortman, 2008).

6.4 Study significance and contribution to knowledge

This study identified and addressed the current gaps in teachers' and students' understanding of inclusive education, inclusive teaching and full participation. The findings show that irrespective of context, inclusive education teachers are constantly challenged in implementing full participation practices in inclusive schools. In this study, teachers' challenges were reflected in their attitudes and numerous barriers they identified as well as how they segregated their students into disability groupings. It can be argued that the teaching strategies they implemented were not inclusive but based on segregated practices as they were not able to make appropriate modifications to help

students who are deaf or hard of hearing learn together with their peers without disabilities. Most parents and teachers were not convinced that inclusion and full participation were the best options for students who are deaf or hard of hearing. Their opinions were based on their personal experiences of how their children were represented in the elementary schools. This has implications for improving school policy to facilitate greater inclusion and full participation of students who are deaf or hard of hearing. Bearing mind that inclusive education is not for students with disabilities alone but quality education concept that removes barriers to the participation of all students, first and foremost, it is pertinent to place inclusive teaching at the centre of full participation. In this sense, the findings of this study give prominence to inclusive teaching and the collaborative nature of learning. It is argued that through peer and adult interaction children learn and internalise cultural values, beliefs, knowledge, and means of participating in their cultural community (Bodrova & Leong, 2007; Vygotsky, 1978). The main and distinctive aspect of this research was the ways in which teachers working in inclusive schools can use inclusive teaching principles to orchestrate belonging and maintain relationships that encourage full participation.

This study contributes to knowledge and adds to the literature in the field of inclusive education. Since inclusive teaching and full participation were shown to be the core aspects of reducing exclusion in education knowledge of how to develop and attach meaning to these concepts is critical for teachers. While teachers believed inclusion is important they do not have the necessary tools to make inclusion work in their schools. This calls for initiating a whole school inclusive development strategy to help build the capacity and knowledge required to make inclusion and full participation work in the respective

elementary schools in Saudi Arabia. The elementary schools, teachers, students, and parents stand to benefit substantially when the schools in Saudi Arabia succeeded in implementing the concepts of inclusive teaching and full participation.

In theoretical terms, drawing on Vygotsky's cultural-historical theory for this study allowed deeper analysis that made it clear increased connectivity and social participation help all children to learn better in inclusive programmes as opposed to segregation (Bodrova & Leong, 2007; Vygotsky, 1993). In addition, through the use of cultural-historical theory in this research, it became clear that social construction of disability can give rise to pejorative views of children who are deaf or hard of hearing as deficient and in need of fixing or specialised services before they can access inclusive schools and enjoy full participation. Such views are not only flawed, but they are also instigated by medico-pathological perspectives, leading to exclusion, segregation, and marginalisation of students defined as the "Other". In this sense, there is a need for re-imagining disability and views about general education teachers that they cannot be teaching students who are deaf or hard of hearing needs to be changed through professional learning.

In practical terms, this study identified a series of areas that teachers, parents, and students can be educated. Teachers need support in terms of further training to deepen their understanding of inclusive teaching and full participation. They also need support to reduce their workload as well as the provision of adequate infrastructure and resources to teach all students (Kortman, 2008). Parents also need support in understanding how inclusive schools work as well as their roles in supporting schools. Finally, students also require support in how to welcome and accept differences.

6.5 Limitations of the study

Despite the significance of this study's findings, it is appropriate to indicate the key limitations of this study. There are three main limitations of this study. Firstly, this is a small study conducted in two cities in Riyadh and Jazan in Saudi Arabia. Although teachers, parents, and students who are deaf or hard of hearing were involved, the study did not cover a wide geographical region of Saudi Arabia. The findings from this study, therefore, cannot be generalised to the elementary schools in Saudi Arabia. Secondly, the sample size and composition are not representative of the target population. Throughout, the purposeful sampling strategy was used and while five students who are deaf or hard of hearing were involved in the study, those without a disability were not involved. Thus, the perspectives expressed by the five students may not provide understanding into how children without disabilities socialise with those who are deaf or hard of hearing. Thirdly, whilst this is not strictly a specific limitation of this study per se, there is little research on inclusive teaching and full participation in the Saudi context to compare the findings of this research. In addition, while Vygotsky's cultural-historical theory supports researchers to consider the cultural context and relationships with others when conducting research and analysing data, my inexperience might have limited the depth of theoretical explication of the unit of analysis including social interactions and Saudi cultural meanings of disability.

6.6 Recommendations for future research

In view of these limitations, future research needs to consider exploring and analysing Saudi cultural meanings of disability vis-a-vis inclusive education, inclusive teaching, and full participation. In addition, there is a need for future

researchers to investigate on a large scale, how Saudi elementary schools understand and use Saudi inclusive education policies to inform their inclusive school programmes and practices. Finally, an experimental study using control and an experimental group can investigate full inclusion versus pull-out practices given the provision of adequate support, resources, and quality teachers.

6.7 Concluding Remarks

The aim of this study was to contribute to the knowledge of full participation in elementary inclusive schools in Saudi Arabia. Through quantitative data generated through questionnaires and interview data, I analysed and provide in detail the ways in which meanings were constructed for inclusion, inclusive teaching, and full participation. The findings also illuminated participants' inclusive teaching and full participation experiences as well as barriers and facilitators to full participation and inclusive teaching. The study provided a snapshot of the overall sense of professional practice and views regarding inclusive education and full participation in the Saudi context. Generally, the findings constructed a complex picture of practices, values, beliefs, and attitudes, resulting in a unique cultural context of Saudi Arabia. While these findings displayed some characteristics that were representative of the broader inclusive elementary schools of Saudi Arabia, they are linked to a certain time and place. Saudi Arabia is a huge country that is beginning the journey on inclusive education. The drive of the government of Saudi Arabia to make the schools inclusive is a good one. Despite the dynamic and complex understandings, inclusion in education is more than just a place of socialisation of individual students with or without disability (Sharma, Loreman, & Forlin, 2012). Rather it is quality teaching, flexible and accessible learning with the

support that eliminates exclusion, marginalisation and value the contributions of every individual learner. This identity of inclusive education is also contingent on our beliefs about disability and education for all.

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Appendices

Appendix One: Statistical tables showing results

Table 8 Attitudes of participants

Questionnaire items	Strongly Disagree/ Disagree % (n)	Not sure %(n)	Strongly Agree/Agree % (n)
1. Students who are deaf/hard of hearing should have all their education in regular schools	7.4(11)	12.2(18)	80.4(119)
2. Students who are deaf/hard of hearing should be in special education classes.	13.5(20)	15.5(23)	70.9(105)
3. All efforts should be made to educate students who are deaf/hard of hearing in the regular education classroom.	24.3(36)	29.1(43)	46.6(69)
4. All students will benefit from having deaf/hearing students in the class.	7.4(11)	12.2(18)	84.4(119)
5. All deaf students should have access to inclusive schools.	40.6(60)	23.6(35)	35.8(53)
6. Regular education teachers should not be responsible for teaching deaf/hard of hearing students.	33.1(49)	13.5(20)	53.4(79)
7. Including deaf/hard of hearing students in all aspects of the curriculum is not possible in inclusive schools.	21.6(32)	23.0(34)	55.4(82)
8. I am confident to teach deaf/hard of hearing students in inclusive classroom.	7.5(11)	14.9(22)	77.7(115)
9. It should be the role of Special education teachers to teach deaf/hard of hearing students.	12.2 (18)	27.0(40)	60.8(90)
10. Deaf/hard of hearing students who are physically aggressive towards others should be included in regular education classrooms	11.5(17)	14.9(22)	73.6(109)
11. I am concerned about the behaviour of deaf/hard of hearing students in inclusive classrooms.	12.9(19)	13.5(20)	73.6(109)
12. The major issue for me is the lack of adequate support to help me include all students in my class.	8.8(13)	29.7(44)	61.5(91)
13. Including deaf/hard of hearing students in inclusive classes will reduce the academic standard for all students.	5.5(7)	7.4(11)	87.2(129)

14. My workload has increased because of inclusion.	10.2(15)	21.6(32)	68.3(101)
15. It is difficult to give equal attention to all students in an inclusive classroom.	11.5(17)	22.2(18)	76.3(113)
16. Inclusive schools are the appropriate educational placements for students who are deaf/hard of hearing.	17.6(26)	9.5(14)	73.0(108)

Table 9 Group statistics for attitudes

Items	Urban			Rural		
	N	Mean	SD	N	Mean	SD
1.Students who are deaf/hard of hearing should have all their education in regular schools	66	3.94	.72	82	3.80	.74
2. Students who are deaf/hard of hearing should be in special education classes.	66	3.79	.79	82	3.49	.74
3. All efforts should be made to educate students who are deaf/hard of hearing in the regular education classroom.	66	3.33	.95	82	3.22	.83
4. All students will benefit from having deaf/hearing students in the class.	66	4.03	.80	82	3.85	.77
5. All deaf students should have access to inclusive schools.	66	2.79	.98	82	2.96	1.12
6. Regular education teachers should not be responsible for teaching deaf/hard of hearing students.	66	3.09	1.09	82	3.28	1.08
7. Including deaf/hard of hearing students in all aspects of the curriculum is not possible in inclusive schools.	66	3.36	.99	82	3.33	.90
8. I am confident to teach deaf/hard of hearing students in inclusive classroom.	66	3.85	.53	82	3.66	.77
9. It should be the role of special education teachers to teach deaf/hard of hearing students.	66	3.62	.72	82	3.43	.80
10. Deaf/hard of hearing students who are physically aggressive towards others should be included in regular education classrooms.	66	3.83	.54	82	3.49	.84
11. I am concerned about the behaviour of deaf/hard of hearing students in inclusive classrooms.	66	3.83	.65	82	3.55	.90
12. The major issue for me is the lack of adequate support to help me include all students in my class.	66	3.55	.64	82	3.55	.77
13. Including deaf/hard of hearing students in inclusive classes will reduce the academic standard for all students.	66	4.17	.54	82	3.91	.89
14. My workload has increased because of inclusion.	66	3.71	.58	82	3.48	.82
15. It is difficult to give equal attention to all students in an	66	3.70	.70	82	3.63	.79

inclusive classroom.

16. Inclusive schools are the appropriate educational placements for students who are deaf/hard of hearing. 66 3.42 1.16 82 4.11 .99

Table 10 Independent Samples Test (rural/urban participants)

Items		Levene's t-test for Equality of variances		t-test for Equality of Means		
		F	t	df	Sig.	Mean diff.
1.Students who are deaf/hard of hearing should have all their education in regular schools	Equal variances assumed	2.098	1.108	146	.270	.13
	Equal variances not assumed		1.112	141.079	.268	.13
2. Students who are deaf/hard of hearing should be in special education classes.	Equal variances assumed	1.628	2.371	146	.019*	.30
	Equal variances not assumed		2.353	134.848	.020	.30
3. All efforts should be made to educate students who are deaf/hard of hearing in the regular education classroom.	Equal variances assumed	2.044	.776	146	.439	.11
	Equal variances not assumed		.765	130.189	.445	.11
4. All students will benefit from having deaf/hearing students in the class.	Equal variances assumed	.193	1.359	146	.176	.18
	Equal variances not assumed		1.353	136.848	.178	.18
5. All deaf students should have access to inclusive schools.	Equal variances assumed	1.171	-1.002	146	.318	-.18
	Equal variances not assumed		-1.015	144.734	.312	-.18
6. Regular education teachers should not be responsible for teaching deaf/hard of hearing students.	Equal variances assumed	.579	-1.056	146	.293	-.19
	Equal variances not assumed		-1.055	138.709	.293	-.19
7. Including deaf/hard of hearing students in all aspects of the curriculum is not possible in inclusive schools.	Equal variances assumed	.152	.221	146	.826	.03
	Equal variances not assumed		.219	133.532	.827	.03
8. I am confident to teach deaf/hard of hearing students in inclusive classroom.	Equal variances assumed	11.509	1.697	146	.092	.19
	Equal variances not assumed		1.763	142.849	.080	.19
9. It should be the role of special education teachers to teach deaf/hard of hearing students.	Equal variances assumed	2.221	1.535	146	.127	.19
	Equal variances not assumed		1.554	144.291	.122	.19
10. Deaf/hard of hearing students who are physically aggressive towards others should be included in regular education classrooms.	Equal variances assumed	27.274	2.903	146	.004**	.35
	Equal variances not assumed		3.034	140.231	.003	.35
11. I am concerned about the	Equal variances assumed	18.126	2.151	146	.033*	.28

behaviour of deaf/hard of hearing students in inclusive classrooms.	Equal variances not assumed	2.228	144.100	.027	.28
12. The major issue for me is the lack of adequate support to help me include all students in my class. .	Equal variances assumed 1.919	-.028	146	.978	-.003
	Equal variances not assumed	-.029	145.903	.977	-.003
13. Including deaf/hard of hearing students in inclusive classes will reduce the academic standard for all students.	Equal variances assumed 2.607	2.014	146	.046*	.25
	Equal variances not assumed	2.118	136.680	.036	.25
14. My workload has increased because of inclusion.	Equal variances assumed 12.371	1.983	146	.049*	.24
	Equal variances not assumed	2.057	143.509	.041	.24
15. It is difficult to give equal attention to all students in an inclusive classroom.	Equal variances assumed .461	.504	146	.615	.06
	Equal variances not assumed	.511	144.708	.610	.06
16. Inclusive schools are the appropriate educational placements for students who are deaf/hard of hearing.	Equal variances assumed 5.646	-3.863	146	.000**	-.69
	Equal variances not assumed	-3.797	128.210	.000	-.69

*Mean difference is significant at $p < 0.05$ level

** Mean difference is significant at $p < 0.01$ level

Table 11 Group Statistics on attitudes (female and males)

Items	Female			Male		
	N	Mean	SD	N	Mean	SD
1.Students who are deaf/hard of hearing should have all their education in regular schools	80	3.85	.71	68	3.88	.76
2. Students who are deaf/hard of hearing should be in special education classes.	80	3.55	.79	68	3.71	.75
3. All efforts should be made to educate students who are deaf/hard of hearing in the regular education classroom.	80	3.24	.78	68	3.31	1.00
4. All students will benefit from having deaf/hearing students in the class.	80	3.93	.74	68	3.85	.71
5. All deaf students should have access to inclusive schools.	80	2.85	1.04	68	2.93	1.08
6. Regular education teachers should not be responsible for teaching deaf/hard of hearing students.	80	3.30	1.08	68	3.07	1.08
7. Including deaf/hard of hearing students in all aspects of the curriculum is not possible in inclusive schools.	80	3.38	.86	68	3.31	1.03
8. I am confident to teach deaf/hard of hearing	80	3.89	.55	68	3.57	.78

students in inclusive classroom.

9. It should be the role of special education teachers to teach deaf/hard of hearing students.	80	3.56	.71	68	3.46	.84
10. Deaf/hard of hearing students who are physically aggressive towards others should be included in regular education classrooms.	80	3.55	.79	68	3.75	.66
11. I am concerned about the behaviour of deaf/hard of hearing students in inclusive classrooms.	80	3.85	.58	68	3.47	.98
12. The major issue for me is the lack of adequate support to help me include all students in my class.	80	3.61	.67	68	3.47	.76
13. Including deaf/hard of hearing students in inclusive classes will reduce the academic standard for all students.	80	4.10	.59	68	3.94	.93
14. My workload has increased because of inclusion.	80	3.59	.72	68	3.57	.74
15. It is difficult to give equal attention to all students in an inclusive classroom.	80	3.65	.73	68	3.68	.78
16. Inclusive schools are the appropriate educational placements for students who are deaf/hard of hearing.	80	3.80	1.23	68	3.81	1.00

Table 12 Independent Samples Test for males and female participants.

Items		Levene's Test for Equality of Variances t-test for Equality of Means				
		F	t	df	Sig.	Mean Diff.
1. Students who are deaf/hard of hearing should have all their education in regular schools	Equal variances assumed	.000	-.266	146	.790	-.03
	Equal variances not assumed		-.265	138.597	.792	-.03
2. Students who are deaf/hard of hearing should be in special education classes.	Equal variances assumed	1.928	-1.218	146	.225	-.16
	Equal variances not assumed		-1.223	144.174	.223	-.16
3. All efforts should be made to educate students who are deaf/hard of hearing in the regular education classroom.	Equal variances assumed	7.770	-.487	146	.627	-.07
	Equal variances not assumed		-.478	126.332	.634	-.07
4. All students will benefit from having deaf/hearing students in the class.	Equal variances assumed	.878	-.124	146	.901	-.02
	Equal variances not assumed		-.123	134.676	.903	-.02
5. All deaf students should have access to inclusive schools.	Equal variances assumed	.361	-.436	146	.663	-.08
	Equal variances not assumed		-.435	140.383	.664	-.08

6. Regular education teachers should not be responsible for teaching deaf/hard of hearing students.	Equal variances assumed	.007	1.267	146	.207	.23
	Equal variances not assumed		1.267	142.204	.207	.23
7. Including deaf/hard of hearing students in all aspects of the curriculum is not possible in inclusive schools.	Equal variances assumed	1.599	.426	146	.670	.07
	Equal variances not assumed		.420	131.439	.675	.07
8. I am confident to teach deaf/hard of hearing students in inclusive classroom.	Equal variances assumed	18.575	2.861	146	.005*	.31
	Equal variances not assumed		2.785	118.032	.006	.31
9. It should be the role of special education teachers to teach deaf/hard of hearing students.	Equal variances assumed	2.608	.840	146	.403	.11
	Equal variances not assumed		.828	132.038	.409	.11
10. Deaf/hard of hearing students who are physically aggressive towards others should be included in regular education classrooms.	Equal variances assumed	5.863	-1.653	146	.100	-.20
	Equal variances not assumed		-1.679	145.881	.095	-.20
11. I am concerned about the behaviour of deaf/hard of hearing students in inclusive classrooms.	Equal variances assumed	38.358	2.911	146	.004*	.38
	Equal variances not assumed		2.797	104.167	.006	.38
12. The major issue for me is the lack of adequate support to help me include all students in my class. .	Equal variances assumed	1.945	1.209	146	.229	.14
	Equal variances not assumed		1.196	134.164	.234	.14
13. Including deaf/hard of hearing students in inclusive classes will reduce the academic standard for all students.	Equal variances assumed	3.652	1.262	146	.209	.16
	Equal variances not assumed		1.219	109.505	.226	.16
14. My workload has increased because of inclusion.	Equal variances assumed	.065	.116	146	.908	.01
	Equal variances not assumed		.116	141.165	.908	.01
15. It is difficult to give equal attention to all students in an inclusive classroom.	Equal variances assumed	.021	-.213	146	.832	-.03
	Equal variances not assumed		-.212	138.684	.833	-.03
16. Inclusive schools are the appropriate educational placements for students who are deaf/hard of hearing.	Equal variances assumed	3.372	-.047	146	.962	-.01
	Equal variances not assumed		-.048	145.722	.962	-.01

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- Mean difference is significant at $p < 0.05$ level.

Table 13 Percentage distributions on teacher knowledge

Questionnaire items	Strongly Disagree/ Disagree	Not sure	Strongly Agree/Ag ree
	%(n)	%(n)	%(n)
1. My educational background has prepared me to effectively teach students who are deaf/hard of hearing.	18.9(28)	9.5(14)	71.7(106)
2. I have adequate knowledge and skills to teach all deaf/hard of hearing students in inclusive classes.	14.2(21)	18.2(27)	67.6(100)
3. I need more training in order to appropriately teach students who are deaf/hard of hearing.	18.9(28)	11.5(17)	69.2(103)
4. I am encouraged by my administrators to attend conferences/workshops/courses on teaching students who are deaf/hard of hearing.	23.0(34)	19.6(29)	57.4(85)
5. I do not have the knowledge and skills to teach deaf students	25.0(37)	16.9(25)	58.1(86)
6. I have adequate knowledge of inclusive teaching.	24.3(36)	20.3(30)	55.4(82)
7. I need more training on inclusive teaching.	18.9(28)	16.2(24)	64.9(96)
8. My understanding of the concept of full participation is adequate.	20.3(30)	19.6(29)	60.1(89)
9. I need more training on how to implement inclusive teaching.	20.3(30)	16.2(24)	63.5(94)
10. I know how to use an inclusive pedagogical approach to teach students with deaf/hard of hearing students.	29.1(43)	10.1(15)	60.8(90)
11. I believe that I am qualified and capable of teaching all students.	38.6(57)	13.5(20)	47.9(71)
12. I have adequate knowledge to develop creative new ways of working with all students according to their needs.	28.4(42)	20.3(30)	51.3(76)
13. The learning of every student is transformable through inclusive pedagogy.	31.1(46)	23.6(35)	45.2(67)
14. I know how to modify resources to accommodate students with disabilities	33.8(50)	19.6(29)	46.6(69)
15. I know how to provide each individual student with different modes of instruction based on their needs.	37.2(55)	8.8(13)	54.0(80)

Table 14 Comparison between rural and urban participants' knowledge dimensions.

Items	Urban			Rural		
	N	Mean	SD	N	Mean	SD
1. My educational background has prepared me to effectively teach students who are deaf/hard of hearing.	66	3.68	.93	82	3.62	.92
2. I have adequate knowledge and skills to teach all deaf/hard of hearing students in inclusive classes.	66	3.74	.83	82	3.59	.90
3. I need more training in order to appropriately teach students who are deaf/hard of hearing.	66	3.64	.97	82	3.65	.93
4. I am encouraged by my administrators to attend conferences/workshops/courses on teaching students who are deaf/hard of hearing.	66	3.61	.97	82	3.37	1.02
5. I do not have the knowledge and skills to teach deaf students.	66	3.48	.95	82	3.48	.95
6. I have adequate knowledge of inclusive teaching.	66	3.48	.95	82	3.48	.95
7. I need more training on inclusive pedagogy.	66	3.48	.95	82	3.48	.95
8. My understanding of the concept of full participation is adequate.	66	3.48	.95	82	3.48	.95
9. I need more training on how to implement inclusive teaching.	66	3.73	.94	82	3.44	.97
10. I know how to use an inclusive pedagogical approach to teach students with deaf/hard of hearing students.	66	3.52	1.07	82	3.34	1.04
11. I believe that I am qualified and capable of teaching all students.	66	3.32	1.13	82	3.07	1.05
12. I have adequate knowledge to develop creative new ways of working with all students according to their needs.	66	3.44	.93	82	3.15	.92
13. The learning of every student is transformable through inclusive pedagogy.	66	3.36	1.00	82	3.12	1.05
14. I know how to modify resources to accommodate students with disabilities	66	3.24	1.01	82	3.13	.98
15. I know how to provide each individual student with different modes of instruction based on their needs.	66	3.27	1.14	82	3.32	1.11

Table 3 Independent Samples Test for Rural/Urban teachers' perceived Knowledge.

		Levene's Test for Equality of Variances		t-test for Equality of Means		
Items		F	t	df	Sig.	Mean Diff.
1. My educational background has prepared me to effectively teach students who are deaf/hard of hearing.	Equal variances assumed	.157	.390	146	.697	.06
	Equal variances not assumed		.390	138.939	.697	.06
2. I have adequate knowledge and skills to teach all deaf/hard of hearing students in inclusive classes.	Equal variances assumed	1.954	1.092	146	.277	.16
	Equal variances not assumed		1.102	143.426	.272	.16
3. I need more training in order to appropriately teach students who are deaf/hard of hearing.	Equal variances assumed	.123	-.141	146	.888	-.02
	Equal variances not assumed		-.141	136.827	.888	-.02
4. I am encouraged by my administrators to attend conferences/workshops/courses on teaching students who are deaf/hard of hearing.	Equal variances assumed	.894	1.449	146	.150	.24
	Equal variances not assumed		1.457	141.935	.147	.24
5. I do not have the knowledge and skills to teach deaf students	Equal variances assumed	.881	1.521	146	.130	.25
	Equal variances not assumed		1.526	141.138	.129	.25
6. I have adequate knowledge of inclusive teaching.	Equal variances assumed	.154	.987	146	.325	.16
	Equal variances not assumed		.988	139.794	.325	.16
7. I need more training on inclusive pedagogy.	Equal variances assumed	.142	.291	146	.771	.05
	Equal variances not assumed		.290	136.587	.772	.05
8. My understanding of the concept of full participation is adequate.	Equal variances assumed	.975	1.421	146	.157	.23
	Equal variances not assumed		1.426	141.116	.156	.23
9. I need more training on how to implement inclusive teaching.	Equal variances assumed	1.673	1.824	146	.070	.29
	Equal variances not assumed		1.831	141.178	.069	.29
10. I know how to use an inclusive pedagogical approach to teach students with deaf/hard of hearing students.	Equal variances assumed	.033	.994	146	.322	.17
	Equal variances not assumed		.992	137.861	.323	.17
11. I believe that I am qualified and capable of teaching all students.	Equal variances assumed	.747	1.366	146	.174	.25
	Equal variances not assumed		1.355	134.968	.178	.25
12. I have adequate knowledge to develop	Equal variances assumed	.048	1.919	146	.057	.29

creative new ways of working with all students according to their needs.	Equal variances not assumed	1.916	138.520	.057	.29
13. The learning of every student is transformable through inclusive pedagogy.	Equal variances assumed .058	1.423	146	.157	.24
	Equal variances not assumed	1.430	141.646	.155	.24
14. I know how to modify resources to accommodate students with disabilities	Equal variances assumed .060	.660	146	.510	.11
	Equal variances not assumed	.658	137.463	.512	.11
	Equal variances assumed .814	-.238	146	.812	-.04
15. I know how to provide each individual student with different modes of instruction based on their needs.	Equal variances not assumed	-.238	137.460	.813	-.04

Table 4 Group statistics comparing inclusive knowledge of female and male teachers

Items	Female			Male		
	N	Mean	SD	N	Mean	SD
16. My educational background has prepared me to effectively teach students who are deaf/hard of hearing.	80	3.61	.88	68	3.69	.98
17. I have adequate knowledge and skills to teach all deaf/hard of hearing students in inclusive classes.	80	3.76	.82	68	3.53	.92
18. I need more training in order to appropriately teach students who are deaf/hard of hearing.	80	3.73	.90	68	3.56	1.00
19. I am encouraged by my administrators to attend conferences/workshops/courses on teaching students who are deaf/hard of hearing.	80	3.43	1.00	68	3.53	1.01
20. I do not have the knowledge and skills to teach deaf students.	80	3.43	.99	68	3.46	.98
21. I have adequate knowledge of inclusive teaching.	80	3.48	.91	68	3.31	1.00
22. I need more training on inclusive pedagogy.	80	3.60	.89	68	3.56	.98
23. My understanding of the concept of full participation is adequate.	80	3.66	.90	68	3.43	1.07
24. I need more training on how to implement inclusive teaching.	80	3.68	.85	68	3.44	1.07
25. I know how to use an inclusive pedagogical approach to teach students with deaf/hard of hearing students.	80	3.51	.99	68	3.31	1.12
26. I believe that I am qualified and capable of teaching all students.	80	3.19	1.11	68	3.18	1.06
27. I have adequate knowledge to develop creative new ways of working with all students according to their needs.	80	3.38	.96	68	3.16	.89

28. The learning of every student is transformable through inclusive pedagogy.	80	3.30	1.00	68	3.15	1.07
29. I know how to modify resources to accommodate students with disabilities	80	3.14	.94	68	3.24	1.05
30. I know how to provide each individual student with different modes of instruction based on their needs.	80	3.31	1.11	68	3.28	1.14

Table 5 Independent Samples Test (female/male) knowledge

		Levene's Test for Equality of Variances	t-test for Equality of Means			
Items		F	t	df	Sig.	Mean Diff.
1. My educational background has prepared me to effectively teach students who are deaf/hard of hearing.	Equal variances assumed	.450	-.514	146	.608	-.08
	Equal variances not assumed		-.510	135.905	.611	-.08
2. I have adequate knowledge and skills to teach all deaf/hard of hearing students in inclusive classes.	Equal variances assumed	4.130	1.632	146	.105	.23
	Equal variances not assumed		1.616	135.052	.108	.23
3. I need more training in order to appropriately teach students who are deaf/hard of hearing.	Equal variances assumed	3.339	1.065	146	.289	.17
	Equal variances not assumed		1.056	136.340	.293	.17
4. I am encouraged by my administrators to attend conferences/workshops/courses on teaching students who are deaf/hard of hearing.	Equal variances assumed	.004	-.628	146	.531	-.10
	Equal variances not assumed		-.627	141.681	.532	-.10
5. I do not have the knowledge and skills to teach deaf students	Equal variances assumed	.046	-.190	146	.850	-.03
	Equal variances not assumed		-.190	142.491	.850	-.03
6. I have adequate knowledge of inclusive teaching.	Equal variances assumed	1.256	1.058	146	.292	.17
	Equal variances not assumed		1.050	137.452	.295	.17
7. I need more training on inclusive pedagogy.	Equal variances assumed	1.222	.267	146	.790	.04
	Equal variances not assumed		.265	136.945	.792	.04
8. My understanding of the concept of full participation is adequate.	Equal variances assumed	6.544	1.459	146	.147	.24
	Equal variances not assumed		1.438	131.462	.153	.24
9. I need more training on how to implement inclusive teaching.	Equal variances assumed	10.653	1.478	146	.142	.23
	Equal variances not assumed		1.451	127.424	.149	.23

10. I know how to use an inclusive pedagogical approach to teach students with deaf/hard of hearing students.	Equal variances assumed	4.488	1.170	146	.244	.20
	Equal variances not assumed		1.159	135.089	.249	.20
11. I believe that I am qualified and capable of teaching all students.	Equal variances assumed	.778	.061	146	.951	.01
	Equal variances not assumed		.061	144.016	.951	.01
12. I have adequate knowledge to develop creative new ways of working with all students according to their needs.	Equal variances assumed	.761	1.392	146	.166	.21
	Equal variances not assumed		1.400	144.831	.164	.21
13. The learning of every student is transformable through inclusive pedagogy.	Equal variances assumed	.941	.899	146	.370	.15
	Equal variances not assumed		.894	138.610	.373	.15
14. I know how to modify resources to accommodate students with disabilities	Equal variances assumed	2.847	-.598	146	.551	-.10
	Equal variances not assumed		-.592	135.574	.555	-.10
15. I know how to provide each individual student with different modes of instruction based on their needs.	Equal variances assumed	.154	.178	146	.859	.03
	Equal variances not assumed		178	140.272	871	.03

Table 6 Percentage distributions on full participation practices

Questionnaire items	Strongly Disagree/Disagree	Not sure	Strongly Agree/Agree
	%(n)	%(n)	%(n)
1. I feel comfortable in working collaboratively with special education teachers when deaf/hard of hearing students are in my classroom.	18.3(27)	12.8(19)	68.9(102)
2. I do not have enough time to design educational programs for deaf/hard of hearing students.	18.9(28)	4.7(7)	76.3(113)
3. I implement effective collaborative teaching practices for students who are deaf/hard of hearing in a regular classroom.	21.6(32)	8.8(13)	69.9(103)
4. It is always difficult for me to maintain discipline in the classroom with deaf/hard of hearing students.	29.1(43)	10.8(16)	60.1(89)
5. In this school parents work collaboratively with teachers to support deaf or hard of hearing students.	43.2(64)	8.1(12)	48.6(72)
6. I adapt my teaching to meet the needs of all children	21.6(32)	8.1(12)	70.3(104)
7. Deaf/hard of hearing students are not making adequate progress in their learning in inclusive schools.	15.6(25)	5.4(8)	79.1(117)
8. It is difficult to give equal attention to all students when deaf students are included.	19.9(22)	6.8(10)	78.4(116)
9. In my practice, I find it difficult to cope with deaf students'	16.9(25)	14.9(22)	68.2(101)

behaviours.			
10. I find it difficult to work with other staff members.	27.1(40)	8.1(12)	64.9(96)
11. Deaf/hard of hearing students are too difficult to teach in inclusive programs	47.3(70)	10.8(16)	41.9(62)
12. My work with deaf/hard of hearing students is very stressful	35.2(52)	12.8(19)	52(77)
13. Many decisions concerning teaching are taken without involving me	43.3(64)	10.1(15)	46.6(69)
14. I have less time to spend on my own family because of workload.	24.3(36)	14.2(21)	61.5(91)
15. I continually develop creative new ways of working with others.	43.2(64)	23.3(33)	34.5(51)
16. I feel comfortable in approaching my colleagues for help when I teach students with special needs.	44.6(66)	10.1(15)	45.3(67)
17. I always adjust the content of lessons to accommodate individual differences.	28.4(42)	7.4(11)	64.2(95)

Table 7 Independent t-test group statistics on practices (Rural/Urban)

Items	Urban			Rural		
	N	Mean	SD	N	Mean	SD
1. I feel comfortable in working collaboratively with special education teachers when deaf/hard of hearing students are in my classroom.	66	3.83	.74	82	3.38	1.11
2. I do not have enough time to design educational programs for deaf/hard of hearing students.	66	3.82	.70	82	3.48	1.04
3. I implement effective collaborative teaching practices for students who are deaf/hard of hearing in a regular classroom.	66	3.77	.70	82	3.27	1.14
4. It is always difficult for me to maintain discipline in the classroom with deaf/hard of hearing students.	66	3.56	.98	82	3.28	1.19
5. In this school, parents work collaboratively with teachers to support deaf or hard of hearing students.	66	3.56	1.02	82	2.50	1.26
6. I adapt my teaching to meet the needs of all children	66	3.64	.89	82	3.50	1.18
7. Deaf/hard of hearing students are not making adequate progress in their learning in inclusive schools.	66	3.78	.80	82	3.67	1.08
8. It is difficult to give equal attention to all students when deaf students are included.	66	3.83	.81	82	3.70	1.04

9. In my practice, I find it difficult to cope with deaf students' behaviours.	66	3.86	.93	82	3.59	1.13
10. I find it difficult to work with other staff members.	66	3.76	.82	82	3.26	1.27
11. Deaf/hard of hearing students are too difficult to teach in inclusive programs	66	3.29	1.09	82	2.63	1.18
12. My work with deaf/hard of hearing students is very stressful	66	3.44	1.01	82	2.94	1.24
13. Many decisions concerning teaching are taken without involving me	66	3.27	1.03	82	2.82	1.13
14. I have less time to spend on my own family because of workload.	66	3.74	.97	82	3.26	1.17
15. I continually develop creative new ways of working with others.	66	3.21	1.02	82	2.51	1.24
16. I feel comfortable in approaching my colleagues for help when I teach students with special needs.	66	3.25	1.10	82	2.63	1.43
17. I always adjust the content of lessons to accommodate individual differences.	66	3.41	1.04	82	3.60	1.25

Table 20 Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	t	df	Sig.	Mean Diff.
1. I feel comfortable in working collaboratively with special education teachers when deaf/hard of hearing students are in my classroom.	Equal variances assumed	25.247	2.869	146	.005*	.46
	Equal variances not assumed		2.993	141.261	.003	.46
2. I do not have enough time to design educational programs for deaf/hard of hearing students.	Equal variances assumed	25.185	2.282	146	.024*	.35
	Equal variances not assumed		2.379	141.612	.019	.35
3. I implement effective collaborative teaching practices for students who are deaf/hard of hearing in a regular classroom.	Equal variances assumed	37.360	3.141	146	.002*	.50
	Equal variances not assumed		3.302	136.695	.001	.50
4. It is always difficult for me to maintain discipline in the classroom with deaf/hard of hearing students.	Equal variances assumed	9.512	1.539	146	.126	.28
	Equal variances not assumed		1.572	145.918	.118	.28

5. In this school parents work collaboratively with teachers to support deaf or hard of hearing students.	Equal variances assumed	8.404	5.525	146	.000**	1.10
	Equal variances not assumed		5.648	145.978	.000	1.10
6. I adapt my teaching to meet the needs of all children	Equal variances assumed	7.150	.779	146	.437	.14
	Equal variances not assumed		.802	145.416	.424	.14
7. Deaf/hard of hearing students are not making adequate progress in their learning in inclusive schools.	Equal variances assumed	5.757	.640	146	.523	.10
	Equal variances not assumed		.660	145.109	.510	.10
8. It is difficult to give equal attention to all students when deaf students are included.	Equal variances assumed	5.288	.884	146	.378	.14
	Equal variances not assumed		.907	145.917	.366	.14
9. In my practice, I find it difficult to cope with deaf students' behaviours.	Equal variances assumed	8.209	1.609	146	.110	.28
	Equal variances not assumed		1.644	145.956	.102	.28
10. I find it difficult to work with other staff members.	Equal variances assumed	38.776	2.780	146	.006*	.50
	Equal variances not assumed		2.905	140.310	.004	.50
11. Deaf/hard of hearing students are too difficult to teach in inclusive programs	Equal variances assumed	.442	3.460	146	.001*	.65
	Equal variances not assumed		3.490	143.173	.001	.65
12. My work with deaf/hard of hearing students is very stressful	Equal variances assumed	8.240	2.646	146	.009*	.50
	Equal variances not assumed		2.705	145.978	.008	.50
13. Many decisions concerning teaching are taken without involving me	Equal variances assumed	1.706	2.529	146	.013	.46
	Equal variances not assumed		2.555	143.818	.012	.46
14. I have less time to spend on my own family because of workload.	Equal variances assumed	7.187	2.708	146	.008	.49
	Equal variances not assumed		2.765	145.921	.006	.49
15. I continually develop creative new ways of working with others.	Equal variances assumed	5.417	3.695	146	.000**	.70
	Equal variances not assumed		3.776	145.947	.000	.70
16. I feel comfortable in approaching my colleagues for help when I teach	Equal variances assumed	11.592	2.918	146	.004*	.62

students with special needs.	Equal variances not assumed	3.000	145.747	.003	.62	
17. I always adjust the content of lessons to accommodate individual differences.	Equal variances assumed	1.700	-.984	146	.327	-.19
	Equal variances not assumed	-1.004	145.817	.317	-.19	

*Mean difference is significant at $p < 0.05$ level.

**Mean difference is significant at $p < 0.01$ level.

Table 21 Group Statistics on practice perspectives

Items	Female			Male		
	N	Mean	SD	N	Mean	SD
1. I feel comfortable in working collaboratively with special education teachers when deaf/hard of hearing students are in my classroom.	80	3.50	.97	68	3.68	1.0
2. I do not have enough time to design educational programs for deaf/hard of hearing students.	80	3.41	1.00	68	3.88	.74
3. I implement effective collaborative teaching practices for students who are deaf/hard of hearing in a regular classroom.	80	3.43	1.06	68	3.57	.92
4. It is always difficult for me to maintain discipline in the classroom with deaf/hard of hearing students.	80	3.40	1.09	68	3.41	1.12
5. In this school, parents work collaboratively with teachers to support deaf or hard of hearing students.	80	3.13	1.21	68	2.79	1.33
6. I adapt my teaching to meet the needs of all children	80	3.28	1.21	68	3.90	.715
7. Deaf/hard of hearing students are not making adequate progress in their learning in inclusive schools.	80	3.56	1.08	68	3.90	.78
8. It is difficult to give equal attention to all students when deaf students are included.	80	3.56	1.04	68	3.99	.76
9. In my practice, I find it difficult to cope with deaf students' behaviours.	80	3.70	1.02	68	3.72	1.09
10. I find it difficult to work with other staff members.	80	3.55	1.12	68	3.40	1.11
11. Deaf/hard of hearing students are too difficult to teach in inclusive programs	80	3.03	1.17	68	2.81	1.20
12. My work with deaf/hard of hearing students is very stressful	80	2.93	1.19	68	3.44	1.08
13. Many decisions concerning teaching are taken	80	2.86	1.06	68	3.21	1.14

without involving me

14. I have less time to spend on my own family because of workload.	80	3.26	1.13	68	3.72	1.03
15. I continually develop creative new ways of working with others.	80	2.83	1.09	68	2.82	1.32
16. I feel comfortable in approaching my colleagues for help when I teach students with special needs.	80	2.85	1.18	68	2.99	1.48
17. I always adjust the content of lessons to accommodate individual differences.	80	3.25	1.15	68	3.82	1.09

Table 22 Independent samples test for female and male participants on practices.

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	t	df	Sig.	Mean Diff.
1. I feel comfortable in working collaboratively with special education teachers when deaf/hard of hearing students are in my classroom.	Equal variances assumed	.780	-1.089	146	.278	-.18
	Equal variances not assumed		-1.086	140.628	.279	-.18
2. I do not have enough time to design educational programs for deaf/hard of hearing students.	Equal variances assumed	22.044	-3.190	146	.002**	-.47
	Equal variances not assumed		-3.266	143.493	.001	-.47
3. I implement effective collaborative teaching practices for students who are deaf/hard of hearing in a regular classroom.	Equal variances assumed	6.093	-.900	146	.370	-.15
	Equal variances not assumed		-.911	145.958	.364	-.15
4. It is always difficult for me to maintain discipline in the classroom with deaf/hard of hearing students.	Equal variances assumed	.002	-.064	146	.949	-.01
	Equal variances not assumed		-.064	139.923	.949	-.01
5. In this school parents work collaboratively with teachers to support deaf or hard of hearing students.	Equal variances assumed	2.034	1.585	146	.115	.33

	Equal variances not assumed	1.572	136.527	.118	.33	
6.I adapt my teaching to meet the needs of all children	Equal variances assumed	49.384-3.718	146	.000**	-.62	
	Equal variances not assumed	-3.867	131.088	.000	-.62	
7. Deaf/hard of hearing students are not making adequate progress in their learning in inclusive schools.	Equal variances assumed	15.606-2.133	146	.035*	-.35	
	Equal variances not assumed	-2.189	142.309	.030	-.35	
8. It is difficult to give equal attention to all students when deaf students are included.	Equal variances assumed	15.143-2.774	146	.006**	-.42	
	Equal variances not assumed	-2.843	143.016	.005	-.42	
9. In my practice, I find it difficult to cope with deaf students' behaviours.	Equal variances assumed	.738	-.118	146	.906	-.02
	Equal variances not assumed	-.118	138.878	.906	-.02	
10. I find it difficult to work with other staff members.	Equal variances assumed	.039	.830	146	.408	.15
	Equal variances not assumed	.831	142.799	.407	.15	
11. Deaf/hard of hearing students are too difficult to teach in inclusive programs	Equal variances assumed	.463	1.108	146	.270	.22
	Equal variances not assumed	1.105	140.909	.271	.22	
12. My work with deaf/hard of hearing students is very stressful	Equal variances assumed	1.132	-2.741	146	.007**	-.52
	Equal variances not assumed	-2.762	145.246	.006	-.52	
13. Many decisions concerning teaching are taken without involving me	Equal variances assumed	1.110	-1.893	146	.060	-.34
	Equal variances not assumed	-1.882	138.539	.062	-.34	

14. I have less time to spend on my own family because of workload.	Equal variances assumed	1.944	-2.550	146	.012*	-.46
	Equal variances not assumed		-2.569	145.241	.011	-.46
15. I continually develop creative new ways of working with others.	Equal variances assumed	10.036	.007	146	.994	.001
	Equal variances not assumed		.007	130.259	.994	.001
16. I feel comfortable in approaching my colleagues for help when I teach students with special needs.	Equal variances assumed	13.322	-.618	146	.538	-.14
	Equal variances not assumed		-.607	127.426	.545	-.14
17. I always adjust the content of lessons to accommodate individual differences.	Equal variances assumed	4.219	-3.090	146	.002**	-.57
	Equal variances not assumed		-3.104	144.270	.002	-.57

*Mean difference is significant at $p < 0.05$ level.

**Mean difference is significant at $p < 0.01$ level.

Table 23 Percentage distributions on facilitators and barriers

Questionnaire items	Strongly Disagree/ Disagree	Not sure	Strongly Agree/Agree
	%(n)	%(n)	%(n)
1. I feel supported by my administrators when faced with challenges presented by students who are deaf/hard of hearing in my classroom.	49.3(73)	16.9(25)	33.7(50)
2. My district provides me with sufficient opportunities in order for me to appropriately teach students who are deaf/hard of hearing.	17.6(26)	8.8(13)	73.7(109)
3. My colleagues are willing to help me with issues, which may arise when I have students who are deaf/hard of hearing in my classroom.	47.3(70)	18.2(27)	34.5(51)
4. Parents support teachers in the education of deaf/hard of hearing students.	10.9(16)	12.2(18)	77.1(114)
5. My school has adequate resources to support all deaf/hard of hearing students to fully participate in our class.	33.1(49)	14.2(21)	52.7(78)

6. Government support for our school is great.	38.5(57)	23.0(34)	38.5(57)
7. Parents care a lot about their students' education and progress.	38.5(57)	13.5(20)	48.0(71)
8.The teachers in my school work as a team	52.7(78)	10.8(16)	36.5(54)
9. I am provided with sufficient materials in order to be able to make appropriate accommodations for students with special needs.	14.8(22)	10.1(15)	75.0(111)
10. I feel supported by my administrators when faced with challenges in my classroom.	36.0(68)	13.5(20)	40.6(60)
11. My administrators provide me with sufficient support when I have deaf/hard of hearing students in my classroom.	32.5(48)	17.6(26)	50.0(74)
12. There is not enough administrative support for staff.	29.0(43)	16.2(24)	54.7(81)
13. There are inadequate support staff for teachers.	28.4(42)	14.2(21)	57.5(85)
14. My school has difficulty in accommodating deaf students because of inappropriate resources.	48.6(72)	16.9(25)	34.4(51)
15. Parents' level of participation is low.	26.3(39)	12.2(18)	61.5(91)
16.My school does not have enough funds for implementing programs successfully	36.5(60)	13.5(20)	50.0(74)
17.I do not receive enough support for my work	27.0(40)	8.1(12)	64.9(96)

Table 24 Group statistics for barriers/facilitators

Item	Urban			Rural		
	N	Mean	SD	N	Mean	SD
1. I feel supported by my administrators when faced with challenges presented by students who are deaf/hard of hearing in my classroom.	66	2.70	1.25	82	2.74	1.38
2. My district provides me with sufficient opportunities in order for me to appropriately teach students who are deaf/hard of hearing.	66	3.71	1.13	82	3.59	1.29
3. My colleagues are willing to help me with issues, which may arise when I have students who are deaf/hard of hearing in my classroom.	66	2.70	1.35	82	2.66	1.40
4. Parents support teachers in the education of deaf/hard of hearing students.	66	3.77	1.03	82	3.82	1.03
5. My school has adequate resources to support all deaf/hard of hearing students to fully participate in our class.	66	3.06	1.16	82	3.29	1.34
6. Government support for our school is great.	66	3.09	1.29	82	2.74	1.29

7. Parents care a lot about their students' education and progress.	66	2.82	1.26	82	3.21	1.20
8. The teachers in my school work as a team	66	2.70	1.39	82	2.57	1.49
9. I am provided with sufficient materials in order to be able to make appropriate accommodations for students with special needs.	66	3.73	1.05	82	3.78	1.04
10. I feel supported by my administrators when faced with challenges in my classroom.	66	2.77	1.33	82	2.70	1.50
11. My administrators provide me with sufficient support when I have deaf/hard of hearing students in my classroom.	66	3.12	1.28	82	3.27	1.26
12. There is not enough administrative support for staff.	66	3.29	1.37	82	3.38	1.29
13. There are inadequate support staff for teachers.	66	3.61	1.12	82	3.29	1.27
14. My school has difficulty in accommodating deaf students because of inappropriate resources.	66	2.80	1.19	82	2.95	1.27
15. Parents' level of participation is low.	66	3.85	1.07	82	3.48	1.41
16. My school does not have enough funds for implementing programs successfully	66	3.53	1.07	82	3.09	1.41
17. I do not receive enough support for my work	66	3.82	1.14	82	3.61	1.37

Table 25 Independent sample test for barriers/facilitators

Independent Samples Test for Urban and Rural

		Levene's Test for Equality of Variances t-test for Equality of Means				
		F	t	df	Sig.	Mean Diff.
1. I feel supported by my administrators when faced with challenges presented by students who are deaf/hard of hearing in my classroom.	Equal variances assumed	1.428	-.215	146	.830	-.05
	Equal variances not assumed		-.217	143.795	.829	-.05
2. My district provides me with sufficient opportunities in order for me to appropriately teach students who are deaf/hard of hearing.	Equal variances assumed	1.990	.628	146	.531	.13
	Equal variances not assumed		.637	144.754	.525	.13
3. My colleagues are willing to help me with issues which may arise when I have students who are deaf/hard of hearing in my classroom.	Equal variances assumed	.787	.169	146	.866	.04
	Equal variances not assumed		.170	141.342	.866	.04

4. Parents support teachers in the education of deaf/hard of hearing students.	Equal variances assumed	.097	-.260	146	.796	-.04
	Equal variances not assumed		-.259	139.161	.796	-.04
5. My school has adequate resources to support all deaf/hard of hearing students to fully participate in our class.	Equal variances assumed	3.624	-1.102	146	.272	-.23
	Equal variances not assumed		-1.119	145.023	.265	-.23
6. Government support for our school is great.	Equal variances assumed	.156	1.626	146	.106	.35
	Equal variances not assumed		1.627	139.682	.106	.35
7. Parents care a lot about their students' education and progress.	Equal variances assumed	.775	-1.911	146	.058	-.39
	Equal variances not assumed		-1.901	136.305	.059	-.39
8. The teachers in my school work as a team	Equal variances assumed	1.975	.517	146	.606	.12
	Equal variances not assumed		.521	142.775	.603	.12
9. I am provided with sufficient materials in order to be able to make appropriate accommodations for students with special needs.	Equal variances assumed	.067	-.308	146	.758	-.05
	Equal variances not assumed		-.308	139.139	.758	-.05
10. I feel supported by my administrators when faced with challenges in my classroom.	Equal variances assumed	3.293	.329	146	.743	.08
	Equal variances not assumed		.333	144.452	.739	.08
11. My administrators provide me with sufficient support when I have deaf/hard of hearing students in my classroom.	Equal variances assumed	.213	-.701	146	.485	-.15
	Equal variances not assumed		-.699	138.108	.486	-.15
12. There is not enough administrative support for staff.	Equal variances assumed	1.254	-.411	146	.682	-.09
	Equal variances not assumed		-.409	135.754	.683	-.09
13. There are inadequate support staff for teachers.	Equal variances assumed	4.084	1.570	146	.119	.31
	Equal variances not assumed		1.591	144.746	.114	.31
14. My school has difficulty in accommodating deaf students because of inappropriate resources.	Equal variances assumed	1.565	-.726	146	.469	-.15
	Equal variances not assumed		-.731	142.385	.466	-.15
15. Parents' level of participation is low.	Equal variances assumed	21.716	1.778	146	.078	.37

	Equal variances not assumed		1.830	145.569	.069	.37
16. My school does not have enough funds for implementing programs successfully	Equal variances assumed	14.857	2.121	146	.036*	.45
	Equal variances not assumed		2.184	145.567	.031	.45
17. I do not receive enough support for my work	Equal variances assumed	10.620	.993	146	.322	.21
	Equal variances not assumed		1.013	145.846	.313	.21

*Mean difference is significant at the $P < 0.05$ level.

Table 8 Independent T-Test (female/male) barriers/facilitators

Item	Female			Male		
	N	Mean	SD	N	Mean	SD
1. I feel supported by my administrators when faced with challenges presented by students who are deaf/hard of hearing in my classroom.	80	2.79	1.29	68	2.65	1.36
2. My district provides me with sufficient opportunities in order for me to appropriately teach students who are deaf/hard of hearing.	80	3.81	1.10	68	3.44	1.32
3. My colleagues are willing to help me with issues, which may arise when I have students who are deaf/hard of hearing in my classroom.	80	2.89	1.35	68	2.43	1.36
4. Parents support teachers in the education of deaf/hard of hearing students.	80	3.84	1.01	68	3.75	1.06
5. My school has adequate resources to support all deaf/hard of hearing students to fully participate in our class.	80	3.14	1.28		3.25	1.27
6. Government support for our school is great.	80	2.86	1.27	68	2.94	1.34
7. Parents care a lot about their students' education and progress.	80	2.96	1.26	68	3.12	1.228 15
8. The teachers in my school work as a team	80	2.56	1.46	68	2.69	1.44
9. I am provided with sufficient materials in order to be able to make appropriate accommodations for students with special needs.	80	3.75	1.05	68	3.76	1.04
10. I feel supported by my administrators when faced with challenges in my classroom.	80	2.74	1.40	68	2.72	1.45
11. My administrators provide me with sufficient support when I have deaf/hard of hearing students in my classroom.	80	3.09	1.2847 1	68	3.34	1.24
12. There is not enough administrative support for staff.	80	3.26	1.39	68	3.43	1.24

13. There are inadequate support staff for teachers.	80	3.44	1.23	68	3.4265	1.20
14. My school has difficulty in accommodating deaf students because of inappropriate resources.	80	2.56	1.12	68	3.26	1.25
15. Parents' level of participation is low.	80	3.73	1.21	68	3.54	1.35
16. My school does not have enough funds for implementing programs successfully	80	3.31	1.31	68	3.25	1.25
17. I do not receive enough support for my work	80	3.54	1.36	68	3.90	1.13

Table 9 Independent Samples Test for females and males regarding facilitators and barriers

		Levene's Test for Equality of Variances	t-test for Equality of Means			
		F	t	df	Sig.	Mean Diff.
1. I feel supported by my administrators when faced with challenges presented by students who are deaf/hard of hearing in my classroom.	Equal variances assumed	.495	.644	146	.520	.14
	Equal variances not assumed		.642	139.552	.522	.14
2. My district provides me with sufficient opportunities in order for me to appropriately teach students who are deaf/hard of hearing.	Equal variances assumed	5.655	1.864	146	.064	.37
	Equal variances not assumed		1.837	131.018	.068	.37
3. My colleagues are willing to help me with issues which may arise when I have students who are deaf/hard of hearing in my classroom.	Equal variances assumed	.237	2.061	146	.041*	.46
	Equal variances not assumed		2.059	141.710	.041	.46
4. Parents support teachers in the education of deaf/hard of hearing students.	Equal variances assumed	.136	.514	146	.608	.09
	Equal variances not assumed		.512	140.032	.609	.09
5. My school has adequate resources to support all deaf/hard of hearing students to fully participate in our class.	Equal variances assumed	.009	-.534	146	.594	-.11
	Equal variances not assumed		-.534	142.402	.594	-.11
6. Government support for our school is great.	Equal variances assumed	1.081	-.367	146	.714	-.08
	Equal variances not assumed		-.365	139.576	.716	-.08
7. Parents care a lot about their students' education and progress.	Equal variances assumed	.011	-.756	146	.451	-.16

	Equal variances not assumed		-.758	143.178	.450	-.16
8.The teachers in my school work as a team	Equal variances assumed	.019	-.486	146	.627	-.12
	Equal variances not assumed		-.487	142.742	.627	-.12
9. I am provided with sufficient materials in order to be able to make appropriate accommodations for students with special needs.	Equal variances assumed	.200	-.085	146	.932	-.01
	Equal variances not assumed		-.085	142.650	.932	-.01
10. I feel supported by my administrators when faced with challenges in my classroom.	Equal variances assumed	.627	.072	146	.943	.02
	Equal variances not assumed		.072	140.411	.943	.02
11. My administrators provide me with sufficient support when I have deaf/hard of hearing students in my classroom.	Equal variances assumed	.007	-1.202	146	.231	-.25
	Equal variances not assumed		-1.205	143.595	.230	-.25
12. There is not enough administrative support for staff.	Equal variances assumed	2.907	-.751	146	.454	-.16
	Equal variances not assumed		-.758	145.708	.450	-.16
13. There are inadequate support staff for teachers.	Equal variances assumed	.161	.055	146	.956	.01
	Equal variances not assumed		.055	143.223	.956	.01
14. My school has difficulty in accommodating deaf students because of inappropriate resources.	Equal variances assumed	3.635	-3.593	146	.000**	-.70
	Equal variances not assumed		-3.562	135.974	.001	-.70
15. Parents' level of participation is low.	Equal variances assumed	4.314	.857	146	.393	.18
	Equal variances not assumed		.850	135.847	.397	.18
16. My school does not have enough funds for implementing programs successfully	Equal variances assumed	.552	.294	146	.769	.06
	Equal variances not assumed		.296	144.213	.768	.06
17.I do not receive enough support for my work	Equal variances assumed	12.332	-1.729	146	.086	-.36
	Equal variances not assumed		-1.754	145.960	.082	-.36

*Mean difference was significant at p=0.05 level.

**Mean difference is significant at p=0.01 level.

Appendix Two: Questionnaire

Exploring the Facilitators and Barriers to Full Participation of Students who are Deaf or Hard of Hearing in Saudi Inclusive Schools

Dear participant, this questionnaire is to find out about your attitudes, knowledge of full participation and inclusive pedagogy, practices as well as facilitators/barriers to full participation of students who are deaf or hard of hearing in inclusive schools. The questionnaire is divided into five parts. Part I collects demographic information. Tick the box that applies to you. Please do not include your names on the questionnaire. Part II collects information on your attitudes. Part III collects information on your knowledge of full participation and inclusive pedagogy. Part IV collects information on practices of full participation and Part V collects information on perceived facilitators/barriers to full participation.

Part I: Demographic details

Tick the box that applies to you

1. Age in years

Less than 20 years	
20-29	
30-39	
40-49	
50+	

2. Years of teaching experience

Less than 5 years	
5-10 years	
11-15 years	
16-20 years	
21+ years	

3. Type of school

Urban	
Rural	

4. Educational administration

Riyadh	
Jazan	

5. Qualifacation

PhD	
Masters	
Bachelors	
Diploma	
Certificate	

6. Professional role

Administrator/principal	
General education teacher	
Special education teacher	
Teacher assistant	
Therapists/special Educator	

Part II- Attitudes toward full participation

	Items	Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
1	Sudents who are deaf/hard of hearing should have all their education in regular schools	1	2	3	4	5
2	Sudents who are deaf/hard of hearing should be in special education classes.	1	2	3	4	5
3	All efforts should be made to educate students who are deaf/hard of hearing in the regular education classroom.	1	2	3	4	5
4	The other students will benefit from having deaf/hearing students in the class.	1	2	3	4	5
5	All deaf students should have access to inclusive schools.	1	2	3	4	5
6	Regular education teachers should not be responsible for teaching deaf/hard of hearing students.	1	2	3	4	5
7	Including deaf/hard of hearing students in all aspects of the curriculum is not possible in inclusive schools.	1	2	3	4	5
8	I am confident to teach deaf/hard of hearing students in inclusive classroom.	1	2	3	4	5
9	Special education teachers should teach deaf/hard of hearing students.	1	2	3	4	5
10	Deaf/hard of hearing students who are physically aggressive towards others should be included in regular education classrooms.	1	2	3	4	5
11	I am concerned about the behaviour of	1	2	3	4	5

	deaf/hard of hearing students in inclusive classrooms.					
12	The major issue for me is the lack of adequate support.	1	2	3	4	5
13	Including deaf/hard of hearing students in inclusive classes will decline the academic standard.	1	2	3	4	5
14	My work load has increased as a result of inclusion.	1	2	3	4	5
15	It is difficult to give equal attention to all students in an inclusive classroom.	1	2	3	4	5
16	Inclusive schools are the appropriate educational placements for students who are deaf/hard of hearing.	1	2	3	4	5

Part III – Knowledge of full participation and inclusive teaching

	Items	Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
1	My educational background has prepared me to effectively teach students who are deaf/hard of hearing.	1	2	3	4	5
2	I have adequate knowledge and skills to teach all deaf/hard of hearing students in inclusive classes.	1	2	3	4	5
3	I need more training in order to appropriately teach students who are deaf/hard of hearing.	1	2	3	4	5
4	I am encouraged by my administrators to attend conferences/workshops on teaching students who are deaf/hard of hearing.	1	2	3	4	5
5	I do not have the knowledge and skills to teach deaf students	1	2	3	4	5
6	I have adequate knowledge	1	2	3	4	5

	of inclusive teaching.					
7	I need more training on inclusive teaching.	1	2	3	4	5
8	My understanding of the concept of full participation is adequate.	1	2	3	4	5
9	Inclusive pedagogy rejects comparing curve thinking	1	2	3	4	5
10	I know how to use inclusive teaching approach to teach students with deaf/hard of hearing students.	1	2	3	4	5
11	I believe that I am qualified and capable of teaching all students.	1	2	3	4	5
12	I have adequate knowledge to develop creative new ways of working with others.	1	2	3	4	5
13	The learning of every student is transformable through inclusive teaching.	1	2	3	4	5
14	I know how to modify resources to accommodate students with disabilities	1	2	3	4	5
15	I know how to provide each individual student with different modes of instruction based on their needs.	1	2	3	4	5

Part IV- Practices of full participation

No	Items	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
1	I feel comfortable in working collaboratively with special education teachers when deaf/hard of hearing students are in my classroom.	1	2	3	4	5
2	I do not have enough time to design educational programs for deaf/hard of hearing students.	1	2	3	4	5
3	I implement effective collaborative teaching practices for students who are deaf/hard of hearing in a regular	1	2	3	4	5

	classroom.					
4	It is always difficult for me to maintain discipline in the classroom with deaf/hard of hearing students.	1	2	3	4	5
5	In this school parents work collaboratively with teachers to support deaf or hard of hearing students.	1	2	3	4	5
6	I adapt my teaching to meet the needs of all children	1	2	3	4	5
7	Deaf/hard of hearing students are not making adequate progress in their learning in inclusive schools.	1	2	3	4	5
8	It is difficult to give equal attention to all students when deaf students are included.	1	2	3	4	5
9	In my practice, I find it difficult to cope with deaf students' behaviours.	1	2	3	4	5
10	I find it difficult to work with other staff members.	1	2	3	4	5
11	Deaf/hard of hearing students are too difficult to teach in inclusive programs	1	2	3	4	5
12	My work with deaf/hard of hearing students is very stressful	1	2	3	4	5
13	Many decisions concerning teaching are taken without involving me	1	2	3	4	5
14	I have less time to spend on my own family because of workload.	1	2	3	4	5
15	I continually develop creative new ways of working with others.	1	2	3	4	5
16	I feel comfortable in approaching my colleagues for help when I teach students with	1	2	3	4	5

	special needs.					
17	I always adjust the content of lessons to accommodate individual differences.	1	2	3	4	5

Part V- Facilitators and barriers toward full participation

No	Items	Strongly disagree	Disagree	Don't know	Agree	Strongly agree
1	I feel supported by my administrators when faced with challenges presented by students who are deaf/hard of hearing in my classroom.	1	2	3	4	5
2	My district provides me with sufficient opportunities in order for me to appropriately teach students who are deaf/hard of hearing.	1	2	3	4	5
3	My colleagues are willing to help me with issues which may arise when I have students who are deaf/hard of hearing in my classroom.	1	2	3	4	5
4	Parents support teachers in the education of deaf/hard of hearing students.	1	2	3	4	5
5	My school has adequate resources to support all deaf/hard of hearing students to fully participate in our class.	1	2	3	4	5
6	Government support for our school is great.	1	2	3	4	5
7	Parents care a lot about their students' education and progress.	1	2	3	4	5
8	The teachers in my school work as a team	1	2	3	4	5
9	I am provided with sufficient materials in order to be able to make appropriate	1	2	3	4	5

	accommodations for students with special needs.					
10	I feel supported by my administrators when faced with challenges in my classroom .	1	2	3	4	5
11	My administrators provide me with sufficient support when I have deaf/hard of hearing students in my classroom.	1	2	3	4	5
12	There is not enough administrative support for staff.	1	2	3	4	5
13	There are inadequate support staff for teachers.	1	2	3	4	5
14	My school has difficulty in accommodating deaf students because of inappropriate resources.	1	2	3	4	5
15	Parents' level of participation is low.	1	2	3	4	5
16	My school does not have enough funds for implementing programs successfully	1	2	3	4	5
17	I do not receive enough support for my work	1	2	3	4	5

Appendix Three: Interviews questions

Teachers' interviews questions

1. Please tell me a little about yourself.
2. What does inclusive education mean to you?
3. What do you understand by full participation in inclusive school?
4. Do you feel resourced enough to support deaf or hard of hearing students' full participation in inclusive schools? If yes, why? If no, why?
5. What is your view on all deaf students being able to access inclusive education full time?
6. How are you prepared as a teacher to implement full participation of deaf students in inclusive schools?
7. From your point of view what is inclusive teaching? How do you implement inclusive teaching? Give some examples.
8. What things make it difficult for you to practice inclusive education that supports full participation of deaf students? Give some examples.
9. What things will make it easier for you to implement full participation of deaf or hard of hearing students in inclusive education programs?
10. What are the things that you liked or disliked about full participation of deaf students in inclusive programs?
11. Any other comments or advice?

Parents' interviews questions

1. What do you know about inclusive schools?
2. How are inclusive schools typically different from other schools?
3. What do you know about full participation?
4. Are you aware of any Saudi Arabian inclusive education policies for students with disabilities? What are your views on these policies?
5. Do you support all students who are deaf to attend inclusive schools full-time? Why?
6. Describe how you feel about including your child in an inclusive school?
7. What are the main challenges to full participation of deaf students including your child in inclusive schools?
8. How do you support your child to overcome those challenges?
9. Please describe your general experience of the inclusive school that your child attends?
10. What do you think can be done to make inclusive schools more effective?
11. What are your views about including all deaf students in inclusive schools?
12. Are there any other issues or concerns that you wish to share that may be relevant to this research?

Students' interviews questions

1. Which school settings do you prefer? Special schools or Inclusive schools?
and why?
2. What are your experiences in attending an inclusive school?
3. What are your views about the teachers who teach you in inclusive school?
4. What challenges do you experience by participating in inclusive schools?
5. How do you cope with those challenges?
6. What things would you want to change to make your educational experiences better in inclusive schools?
7. Describe the level of your participation in school activities in general and those things you were not able to participate in.
8. How do your parents feel about you participating in inclusive schools?

Appendix Four: Sample coding of the data

Coding of Riyadh male teachers' Interviews

Coding labels	Verbatim transcripts	Notes and explanations
Demographic details (age, qualification, experience)	<p>Teacher A</p> <p>1. Please tell me a little about yourself.</p> <p>I am a 32 year old teacher working in a primary school for hearing impaired and speech impaired students. I hold a Bachelor degree in Deaf Education and I worked for 8 years.</p>	Qualified and experienced special educator with specialisation in deaf education.
Concepts of inclusive education	<p>2. What does inclusive education mean to you?</p> <p>I think, it is integration is the social and cognitive integration of students with special needs in regular schools.</p>	Inclusion is used synonymously with integration.
Concepts of full participation	<p>3. What do you understand by full participation in inclusive school?</p> <p>The concept of participation is the participation of students in school activities in general.</p>	Lack of deep understanding of the concept. Seen as mere participation in general school activities
Facilitator-adequate training in deaf education	<p>4. Do you feel resourced enough to support deaf students' full participation in inclusive schools? If yes, why? If no, why?</p> <p>Yes, because I have training in deaf education, it helps me to teach the students to live with the school community in a better way. We also have some resources to support our teaching.</p>	Perception of training as adequate in support for full participation. Resources are perceived as adequate.
Positive attitude	<p>5. What is your view on all deaf students being able to access inclusive education full time?</p> <p>I think it's great if done properly with support from government and community, I mean parents.</p> <p>6. How are you prepared as a teacher to implement full participation of deaf students in inclusive schools?</p>	Full participation is seen as a great idea when implemented well with full support from government and parents

Readiness to teach	<p>I was prepared as a teacher for hearing impaired students through courses and exercises that guide me to know how to deal with these students and integrate them into general education classes</p> <p>7. From your point of view what is inclusive teaching? How do you implement inclusive teaching? Give some examples. This means teaching students with special needs in the classes of where students without disabilities participate in all activities.</p>	Believe in self –efficacy acquired through professional qualification and in-service professional learning.
Concepts of inclusive teaching	<p>8. What things make it difficult for you to practice inclusive education that supports full participation of deaf students? Give some examples. The difficulties I face are in the educational system, curriculum modification, teaching methods, teaching aids and classrooms management issues.</p>	Inclusive teaching is seen as teaching students with special needs. This demonstrates a limited understanding of the concept of inclusive teaching.
Barriers	<p>9. What things will make it easier for you to implement full participation of deaf students in inclusive education programs? One of the things that make it easier for students with hearing disabilities to participate fully is the teacher's willingness to integrate students into general education classes. I think when teachers are positive about the students they can develop appropriate methods to teach them.</p>	Resources and practice barriers.
Facilitators	<p>10. What are the things that you liked or disliked about full participation of deaf students in inclusive programs? In fact, the best training courses for specialist teachers are better and it is best to isolate these students in special classes some times. But if they are there without resources this is what I dislike.</p>	Willingness, acceptance, and positive attitudes of teachers
Motivators and stressors of full participation	<p>11. Any other comments or advice? No, thank you, God helps you</p> <p>Teacher B</p>	

Demographic details (age, qualification, experience)	<p>1. Please tell me a little about yourself. I am a 35 year old teacher of students with hearing disabilities in a primary school in Riyadh. I have Bachelor of Education with specialisation in deaf education. I have been teaching for 10 years now.</p>	Training and support promote positive outlook for full participation.
Concepts of inclusion	<p>2. What does inclusive education mean to you? It is to provide students with special needs the opportunity to learn and participate within regular classes.</p>	
Concepts of full participation	<p>3. What do you understand by full participation in inclusive school? It is the participation of students in all classroom and non-classroom activities.</p> <p>4. Do you feel resourced enough to support deaf or hard of hearing students' full participation in inclusive schools? If yes, why? If no, why? Yes, because I am trained in this kind of education. But we need more technology to make the teaching and learning easier for the teachers and students.</p>	Qualified and experienced SPED teacher.
Readiness to implement full participation	<p>5. What is your view on all deaf students being able to access inclusive education full time? I think it is good idea because it empowers this group is necessary and very important because their full presence in the integration classes helps them to adapt and co-exist.</p>	Inclusion is seen as placement of students with disabilities in regular classroom.
Facilitator		Understanding is related to all curricular and extra-curricular activities.
Attitudes to full inclusion	<p>6. How are you prepared as a teacher to implement full participation of deaf students in inclusive schools? This was done through the establishment of specialized training courses in this field, which I attended.</p> <p>7. From your point of view what is inclusive teaching? How do you implement inclusive teaching? Give some examples. It is the use of new and modern methods and teaching methods such as the use of active teaching in the classroom.</p>	Readiness is linked to training in deaf education.
Readiness to implement		Technological resources are needed to support the work of teachers and students.
		Teachers are positive and relates this to

full participation	<p>8. What things make it difficult for you to practice inclusive education that supports full participation of deaf students? Give some examples.</p> <p>I feel the curriculum is difficult, it is crowded and difficult to modify, students put in their own classes in addition to the possibilities available in the school of teaching methods</p>	<p>empowerment and co-existence of students with and without disabilities.</p>
Concept of inclusive teaching	<p>9. What things will make it easier for you to implement full participation of deaf or hard of hearing students in inclusive education programs?</p> <p>It is the process of placing students in the public classes and encouraging them to participate fully in all activities.</p>	<p>Training in deaf education contributes to self-efficacy in delivering full participation.</p>
Barrier	<p>10. What are the things that you liked or disliked about full participation of deaf students in inclusive programs?</p> <p>Adequate resources matter and we need to match the students levels to teacher skills.</p>	<p>Seen as modern methods of teaching. Example given is active teaching but what this means is not explained further.</p>
Facilitators	<p>11. Any other comments or advice?</p> <p>I prefer to integrate students fully into the public classes and encourage them to participate fully. But I don't like the way things are centralised. We need some flexibility in this type of education</p> <p>And certainly it is not good to isolate them in their own classes within public schools.</p> <p>No thanks for giving me the opportunity to share with you, God helps you.</p>	<p>Difficulty modifying the crowded curriculum.</p> <p>Segregating students into separate classes which does not model full participation.</p>
Motivators and stressors of full participation		<p>Adequate resources</p>
Practices		<p>Encouragement to participate fully,</p>

		Centralised practices, Lack of flexibility in practice Segregation into own classes
--	--	--

Appendix Five: Certificate of Ethical Approval



**COLLEGE OF SOCIAL SCIENCES
AND INTERNATIONAL STUDIES**

Ethics Committee
ssis-ethics@exeter.ac.uk

CERTIFICATE OF ETHICAL APPROVAL

Academic Unit: Graduate School of Education

Title of Project: Exploring the Facilitators and Barriers to Full Participation of Students who are Deaf or Hard of Hearing in Saudi Inclusive Schools

Research Team Member(s): Abdullatif Arishi

Project Contact Point: aa714@exeter.ac.uk

Supervisor(s): Dr. Hannah Anglin-Jaffe
Dr. Christopher Boyle

This project has been approved for the period

From: 15.09.2018
To: 30.05.2019

Ethics Committee approval reference: 201718-184

Signature: **Date:** 24.08.2018

A handwritten signature in black ink that reads 'Stephen Skinner'.

Stephen Skinner
Chair, SSIS College Ethics Committee



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CamScanner

Appendix Six: Permission from the Local Education Authority in Riyadh

الرقم:
التاريخ: ١٤٣٩/١/٢٥
المشروعات:

المملكة العربية السعودية
وزارة التربية والتعليم
(١٨٠)
الإدارة العامة للتربية والتعليم بمنطقة الرياض
Planning & Development
إدارة التخطيط والتطوير

وزارة التربية والتعليم
Ministry of Education

"إفادة"

الموضوع: الموافقة على تطبيق أدوات الدراسة في مدارس تابعة لإدارة التعليم بمنطقة الرياض

الاسم	عبد اللطيف بن محمد بن علي عريشي		
السجل المدني	1065486266	العام الدراسي	1439-1440هـ
الجامعة	جامعة Exeter	التخصص	التربية الخاصة - إعاقة سمعية
الدرجة العلمية	دكتوراه	العينة	معلمين فصول الدمج، الطلاب ذوي الإعاقة السمعية وآبائهم
عنوان الدراسة	اكتشاف مقومات و معوقات المشاركة الكاملة للطلاب الذين لديهم صمم أو ضعف سمعي في فصول الدمج بالمملكة العربية السعودية		
نوع الإفادة	الموافقة على تطبيق الدراسة في المدارس التابعة للإدارة العامة للتعليم بمنطقة الرياض بدءاً من تاريخ 1-6-1440هـ		

السلام عليكم ورحمة الله وبركاته
وبعد ،

بناء على قرار سعادة مدير عام التعليم بمنطقة الرياض رقم 38920793 وتاريخ 1438/6/23هـ بشأن تفويض الصلاحية لإدارة التخطيط والمعلومات لتسهيل مهمة الباحثين والباحثات، وحيث تقدم إلينا الباحث (الموضحة بياناته أعلاه) بطلب إجراء دراسته بداية من تاريخ 1-6-1440هـ ، وعليه نفيدكم أنه لا مانع من تطبيق الدراسة خلال مدة زمنية محددة بـ (90) يوم خلال العام الدراسي الحالي ، على نطاق مدارس منطقة الرياض مع ملاحظة أن الباحث تتحمل كامل المسؤولية المتعلقة بمختلف جوانب البحث ، ولا يعني سماح الإدارة العامة للتعليم موافقتها بالضرورة على مشكلة البحث أو على الطرق والأساليب المستخدمة في دراسته ومعالجته وبناء على طلبه تم منحه الإفادة ، علماً أنه تم الاطلاع على أداة الدراسة (الاستبانة).

شاكرين لكم حسن تعاونكم

إدارة التخطيط والمعلومات

وزارة التعليم
إدارة التخطيط والمعلومات
الإدارة العامة للتربية والتعليم بمنطقة الرياض

رمز العملية ت ط 6ع
الإصدار: 1.0
تاريخ الإصدار: 1436/8/5هـ
صفحة 14 من 18

Appendix Seven: Permission from the Local Education Authority in Jazan

الرقم الموحد : 39927678

14896
1439/08/23

وزارة التعليم
Ministry of Education

المملكة العربية السعودية
وزارة التعليم
(٢٨٠)
الإدارة العامة للتعليم بمنطقة جازان
إدارة التخطيط
التخطيط للخدمات المساندة

الموضوع / بشأن تطبيق أداة بحث / عبداللطيف بن محمد بن علي عريشي

الاسم	رقم جواز السفر	الجامعة
عبداللطيف بن محمد بن علي عريشي	N٤٣٧٤١٣	Exeter
العام الدراسي	الدرجة العلمية	عينة الدراسة
١٤٢٨، ١٤٣٩هـ	الدكتوراه	طلاب العوق السمعي

عنوان الدراسة : اكتشاف مقومات ومعوقات المشاركة الكاملة للطلاب الذين لديهم ضعف السمع بمنطقة جيزان .

المكرم /
السلام عليكم ورحمة الله وبركاته ، وبعد :

إشارة إلى خطابكم رقم (بدون) وتاريخ ١٤٣٩/٨/٢١هـ بشأن طلب الموافقة لتسهيل مهمة تطبيق أداة بحث طالب الدراسات العليا (الموضحة بياناته أعلاه) بمدارس إدارة التعليم بمنطقة جازان .

عليه نشعركم بالموافقة على تطبيق أداة البحث وفق المتبع نظاما في العام الدراسي القادم (١٤٣٩/١٤٤٠هـ) .

والسلام عليكم ورحمة الله وبركاته .

مدير إدارة التخطيط
محمد بن أحمد مظهر

رؤيتنا: تعلم مميز بجودة عالمية
(ت : ٠١٣٢١٢٧١٧ ف : ٠١٣٢٢٦٨٢٠) الموقع الإلكتروني : (http://www.jazanedu.gov.sa/dr)

Appendix Eight: Consent Forms

1. CONSENT FORM FOR TEACHERS

Exploring the Facilitators and Barriers to Full Participation of Students who are Deaf or Hard of Hearing in Saudi Inclusive Schools

I have been fully informed about the aims and purposes of the project.

I agree to participate in the following activities:

- Complete a questionnaire ☐
- Participate in an interview ☐
- Allow the interview to be audio-recorded ☐
- Take part in classroom observation ☐

I understand that:

- There is no compulsion for me to participate in this research project and, if I do choose to participate, I may at any stage withdraw my participation.
- I have the right to refuse permission for the publication of any information about me.
- Any information, which I give, will be used solely for the purposes of this research project, which may include publications.
- All information I give will be treated as confidential.
- The researcher will make every effort to preserve my anonymity.

.....
.....
(Signature of participant)
(Date)

.....
(Printed name of participant)

If you have any concerns about the project that you would like to discuss, please contact:

Abdullatif Arishi
Tel: 0555781883
Email: aa714@exeter.co.uk
Project supervisors:
Dr. Hannah Anglin-Jaffe
Email address: h.a.anglin-jaffe@exeter.ac.uk
Dr. Christopher Boyle
Email address: C.Boyle2@exeter.ac.uk

2. CONSENT FORM FOR PARENTS

Exploring the Facilitators and Barriers to Full Participation of Students who are Deaf or Hard of Hearing in Saudi Inclusive Schools

I have been fully informed about the aims and purposes of the project.

I agree to participate in the following activities:

- Participate in an interview ☐
- Allow the interview to be audio-recorded ☐

I understand that:

- There is no compulsion for me to participate in this research project and, if I do choose to participate, I may at any stage withdraw my participation.
- I have the right to refuse permission for the publication of any information about me.
- Any information, which I give, will be used solely for the purposes of this research project, which may include publications.
- All information I give will be treated as confidential.
- The researcher will make every effort to preserve my anonymity.

.....

.....
(Signature of participant)
(Date)

.....
(Printed name of participant)

If you have any concerns about the project that you would like to discuss, please contact:

Abdullatif Arishi
Tel: 0555781883
Email: aa714@exeter.co.uk
Project supervisors:
Dr. Hannah Anglin-Jaffe
Email address: h.a.anglin-jaffe@exeter.ac.uk
Dr. Christopher Boyle
Email address: C.Boyle2@exeter.ac.uk

3. CONSENT FORM FOR PARENTS/LEGAL GUARDIANS ON BEHALF OF STUDENTS

Exploring the Facilitators and Barriers to Full Participation of Students who are Deaf or Hard of Hearing in Saudi Inclusive Schools

I have been fully informed about the aims and purposes of the project.

I agree for my child to participate in the following activities:

- Participate in an interview ☐
- Allow the interview to be audio-recorded ☐

I understand that:

- There is no compulsion for my child to participate in this research project and, if I do consent for my child to participate, I may at any stage withdraw my child's participation.
- I have the right to refuse permission for the publication of any information about my child.
- Any information, which my child gives, will be used solely for the purposes of this research project, which may include publications.
- All information my child gives will be treated as confidential.
- The researcher will make every effort to preserve my child's anonymity.

.....

.....

(Signature of participant)
(Date)

.....

(Printed name of participant)

If you have any concerns about the project that you would like to discuss, please contact:

Abdullatif Arishi
Tel: 0555781883
Email: aa714@exeter.co.uk
Project supervisors:
Dr. Hannah Anglin-Jaffe
Email address: h.a.anglin-jaffe@exeter.ac.uk
Dr. Christopher Boyle
Email address: C.Boyle2@exeter.ac.uk

4. CONSENT FORM FOR STUDENTS

Exploring the Facilitators and Barriers to Full Participation of Students who are Deaf or Hard of Hearing in Saudi Inclusive Schools

I have been fully informed about the aims and purposes of the project.

I agree to participate in the following activities:

- Participate in an interview ☐
- Allow the interview to be audio-recorded ☐

I understand that:

- There is no compulsion for me to participate in this research project and, if I do choose to participate, I may at any stage withdraw my participation.
- I have the right to refuse permission for the publication of any information about me.
- Any information, which I give, will be used solely for the purposes of this research project, which may include publications.
- All information I give will be treated as confidential.
- The researcher will make every effort to preserve my anonymity.

.....
.....
(Signature of participant)
(Date)

.....
Printed Name of participant

.....
(Signature of Parent/Guardian)

.....
(Printed name of Parent/Guardian)

If you have any concerns about the project that you would like to discuss, please contact:

Abdullatif Arishi
Tel: 0555781883
Email: aa714@exeter.co.uk
Project supervisors:
Dr. Hannah Anglin-Jaffe

Email address: h.a.anglin-jaffe@exeter.ac.uk
Dr. Christopher Boyle
Email address: C.Boyle2@exeter.ac.uk

Appendix Nine: Information Sheets

1. INFORMATION SHEET FOR TEACHERS

Exploring the Facilitators and Barriers to Full Participation of Students who are Deaf or Hard of Hearing in Saudi Inclusive Schools

You are invited to participate in a study to explore the full participation of deaf or hard of hearing students in inclusive elementary schools in Saudi Arabia. This study is being conducted in partial fulfilment of a degree of Doctor of Education (EdD) under the supervision of Dr. Hannah Anglin-Jaffe and Dr. Christopher Boyle

What is the purpose of the study?

The purpose of this study is to investigate the ways in which deaf or hard of hearing students are supported to fully participate in all curriculum areas in inclusive elementary schools. This will enable the identification of the barriers and facilitators of full participation and how to better support teachers and students. I am particularly interested in understanding teachers, parents and students' perspectives and those practices carried out by teachers that support deaf or hard of hearing students to be fully included in inclusive programmes. The personal qualities and attributes of individual teachers and parents are not the focus of this research.

Why have I been invited?

You have been selected to participate in this study because you are currently teaching a deaf or hard of hearing student/s in an inclusive school and have the experience to be able to talk about the teaching decisions that you make in the classroom to support students' full participation.

What is the procedure that is being implemented?

If you consent to participate in this study the following will apply:

As a teacher you will be invited to contribute data in the following ways:

- Completing a questionnaire that will take up to 20 minutes
- By having your teaching observed for one hour and field notes taken.
- By participating in a follow-up interviews for up to 40 minutes. The interview may be audio-recorded but if you choose not to have your voice recorded, hand-written notes will be taken.

Do I have to take part?

Participation is not compulsory. It is entirely up to you to decide whether to take part. If you do decide to take part, you will be asked to sign a consent form. You will still be free to withdraw at any time and without giving a reason. A decision to withdraw or not to take part will not affect you in any way.

What will happen to me if I take part?

If you decide you would like to take part, the researcher will contact you by telephone or by email. Since this study is about getting your perspectives and

observing classroom practices the researcher will find out how you want to receive the questionnaire and whether you would like to participate in an interview or have your classrooms observed. Your involvement in the study would end after which aspect of the project you decide to participate in.

What information do you need from me?

If you agree to take part in the study, the only thing you need to do is to sign the consent form and your contact details so that we can contact you to confirm that you understand what the study is about and would be happy to take part. You will be asked to give data in the form of respond to a questionnaire and/or participate in an interview.

Will I have to do anything differently?

No.

Are there any side effects, disadvantages and risks of taking part?

There are no disadvantages or risks to you of taking part in this research apart from the time you have to make available to participate as indicated on the information sheet.

What are the possible benefits of taking part?

Your perspectives will contribute valuable information on how to improve education programmes that encourage full participation of deaf or hard of hearing students in inclusive schools.

What happens when the research study stops?

The data will be used to prepare a thesis and findings used to develop professional learning programmes for teachers who teach deaf or hard of hearing students in inclusive schools to support their skill development.

Will my taking part in this study be kept confidential?

All information you provided during this research will be kept strictly confidential. Your contact details will be kept on a secure database at the University of Exeter and we will adhere to data protection laws by following a confidentiality protocol. Data will not include your name and data will be shredded and destroyed within after 5 years using confidential waste disposal systems at the University. Please note that if at any time during an interview, or observation you become concerned for your personal safety, you can withdraw your participation.

What will happen to the results of the research study?

The results of the study will be used to produce a thesis and journal articles. Some of the results will be presented at conferences and seminars. You will not be personally identified in any publications from this study or presentations.

What if something goes wrong or I have a complaint?

I do not expect this research will cause any harm to you, however, if you are concerned and wish to complain about any aspect of the way you have been approached or treated during the course of this study, you can contact me by phone 0555781338 or by email aa714@exeter.ac.uk or the research advisors whose details are listed at the end of the form.

Who is organising and funding the research?

I am a doctoral student and this study is funded with a scholarship from the King Khalid University, Abha, Saudi Arabia. It is not a commercially funded study. This means, there is no financial benefit to the researcher and participants.

Who has reviewed the study?

All research in University of Exeter is reviewed by an independent Research Ethics Committee to protect your safety, rights wellbeing and dignity. This study has also been reviewed by my doctoral advisors.

Further Information

Please take time to read the consent form and indicate whether you consent to each part of the study by ticking the box next to each item. Please sign and date the form and post it in the self-addressed envelope or if this is not possible, I will come to collect it myself. If you need further information to help you decide, please contact me or my advisors through the contact details below. Thank you for reading this and for considering taking part in this study.

Contact for Further Information

If you need further information about this study please contact:

Dr. Hannah Anglin-Jaffe	h.a.anglin-jaffe@exeter.ac.uk
Dr. Christopher Boyle	C.Boyle2@exeter.ac.uk
Abdullatif Arishi	aa714@exeter.ac.uk

2. INFORMATION SHEET FOR PARENTS

Exploring the Facilitators and Barriers to Full Participation of Students who are Deaf or Hard of Hearing in Saudi Inclusive Schools

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What is the purpose of the study?

The purpose of this study is to find out the ways in which deaf or hard of hearing students are supported to fully take part in all learning areas in inclusive elementary schools. This will help the researcher to identify things that support or hinder students' learning and how to better support teachers and students. I am particularly interested in understanding teachers, parents and students' views and those practices carried out by teachers that support deaf or hard of hearing students to be fully included in inclusive programmes. The study is not about personal judgement about participants.

Why have I been invited?

You have been selected to participate in this study because you are a parent who has a child (ren) who is deaf/hard of hearing currently attending an inclusive school and you have the experience to be able to talk about your experiences related to your child's education and the things you do to support your child and teachers to enable them teach your child.

What is the procedure that is being implemented?

If you consent to participate in this study, *you will be invited to contribute data* by participating in one-to-one interviews up to 40 minutes. The interview may be audio-recorded but if you choose not to have your voice recorded, hand-written notes will be taken.

Do I have to take part?

Participation is not compulsory. It is entirely up to you to decide whether to take part. If you do decide to take part, you will be asked to sign a consent form. You will still be free to withdraw at any time and without giving a reason. A decision to withdraw or not to take part will not affect you in any way.

What will happen to me if I take part?

If you decide you would like to take part, the researcher will contact you by telephone or by email. Since this study is about getting your perspectives on your experiences and support for teachers and your child's education the researcher will find out how and where you want to be interviewed. Your involvement in the study would end after the interview.

What information do you need from me?

If you agree to take part in the study, the only thing you need to do is to sign the consent form and your contact details so that we can contact you to confirm that you understand what the study is about and would be happy to take part.

Will I have to do anything differently?

No.

Are there any side effects, disadvantages and risks of taking part?

There are no disadvantages or risks to you of taking part in this research apart from the time you have to make available to participate as indicated on the information sheet.

What are the possible benefits of taking part?

Your perspectives will contribute valuable information on how to improve education programmes that encourage full participation of deaf or hard of hearing students in inclusive schools.

What happens when the research study stops?

The data will be used to prepare a thesis and findings used to develop professional learning programmes for teachers who teach deaf or hard of hearing students in inclusive schools to support their skill development.

Will my taking part in this study be kept confidential?

All information you provided during this research will be kept strictly confidential. Your contact details will be kept on a secure database at the University of Exeter and we will adhere to data protection laws by following a confidentiality protocol. Data will not include your name and data will be shredded and destroyed within after 5 years using confidential waste disposal systems at the University. Please note that if at any time during an interview you become concerned for your personal safety, you can withdraw your participation.

What will happen to the results of the research study?

The results of the study will be used to produce a thesis and journal articles. Some of the results will be presented at conferences and seminars. You will not be personally identified in any publications from this study or presentations.

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All research in University of Exeter is reviewed by an independent Research Ethics Committee to protect your safety, rights wellbeing and dignity. This study has also been reviewed by my doctoral advisors.

Further Information

Please take time to read the consent form and indicate whether you consent to each part of the study by ticking the box next to each item. Please sign and date the form and post it in the self-addressed envelope or if this is not possible, I will come to collect it myself. If you need further information to help you decide, please contact me or my advisors through the contact details below. Thank you for reading this and for considering taking part in this study.

Contact for Further Information

If you need further information about this study please contact:

Dr. Hannah Anglin-Jaffe h.a.anglin-jaffe@exeter.ac.uk

Dr. Christopher Boyle C.Boyle2@exeter.ac.uk

Abdullatif Arishi aa714@exeter.ac.uk

3. INFORMATION SHEET FOR STUDENTS

Exploring the Facilitators and Barriers to Full Participation of Students who are Deaf or Hard of Hearing in Saudi Inclusive Schools

You are invited to take part in a study to find out about how deaf or hard of hearing students in inclusive elementary schools in Saudi Arabia are involved in learning activities at school. This study is being conducted in partial fulfilment of a degree of Doctor of Education (EdD) under the supervision of Dr. Hannah Anglin-Jaffe and Dr. Christopher Boyle

What is the purpose of the study?

The purpose of this study is to find out the ways in which deaf or hard of hearing students are supported to fully take part in all learning areas in inclusive elementary schools. This will help the researcher to identify things that support or hinder students' learning and how to better support teachers and students. I am particularly interested in understanding your views about your experiences in the school you attend. . The study is not about personal life.

Why have I been invited?

You have been selected to participate in this study because you are identified as deaf/hard of hearing student currently attending an inclusive school and you have the experience to be able to talk about your experiences related to your educational experiences and the things you do at school with your teachers and school friends.

What is the procedure that is being implemented?

If you agree to participate in this study, you will be invited to participate in one-to-one interviews up to 40 minutes. The interview may be audio-recorded but if you choose not to have your voice recorded, hand-written notes will be taken by the researcher. A sign language specialist in your school will be available to support you during the interview process if you require an assistance.

Do I have to take part?

Participation is not compulsory. It is entirely up to you to decide whether to take part. If you do decide to take part, you will be asked to sign a consent form together with your parents' approval. You will still be free to withdraw at any time and without giving a reason. A decision to withdraw or not to take part will not affect you in any way.

What will happen to me if I take part?

If you decide you would like to take part, the researcher will contact you by the best way you like to receive information. Since this study is about getting your perspectives on your experiences the researcher will find out how and where you want to be interviewed. Your involvement in the study would end after the interview.

What information do you need from me?

If you agree to take part in the study, the only thing you need to do is to sign the consent form with your parent's approval and your contact details so that I can contact you to confirm that you understand what the study is about and would be happy to take part.

Will I have to do anything differently?

No.

Are there any side effects, disadvantages and risks of taking part?

There are no disadvantages or risks to you of taking part in this research apart from the time you have to make available to participate in an interview.

What are the possible benefits of taking part?

Your perspectives will contribute important information on how to make education better for deaf or hard of hearing students in inclusive schools.

What happens when the research study stops?

The data will be used to prepare a thesis and findings used to support teachers who teach deaf or hard of hearing students in inclusive schools to support their skill development.

Will my taking part in this study be kept confidential?

All information you provided during this research will be kept strictly confidential. Your contact details will be kept on a secure database at the University of Exeter and we will adhere to data protection laws by following a confidentiality protocol. Data will not include your name and data will be shredded and destroyed within after 5 years using confidential waste disposal systems at the University. Please note that if at any time during an interview you become concerned for your personal safety, you can withdraw your participation.

What will happen to the results of the research study?

The results of the study will be used to produce a thesis and journal articles. Some of the results will be presented at conferences and seminars. You will not be personally identified in any publications from this study or presentations.

What if something goes wrong or I have a complaint?

I do not expect this research will cause any harm to you, however, if you are concerned and wish to complain about any aspect of the way you have been approached or treated during the course of this study, you can contact me by phone 0555781338 or by email aa714@exeter.ac.uk or the research advisors whose details are listed at the end of the form.

Who is organising and funding the research?

I am a doctoral student and this study is funded with a scholarship from the King Khalid University, Abha, Saudi Arabia. It is not a commercially funded study. This means, there is no financial benefit to the researcher and participants.

Who has reviewed the study?

All research in University of Exeter is reviewed by an independent Research Ethics Committee to protect your safety, rights wellbeing and dignity. This study has also been reviewed by my doctoral advisors.

Further Information

Please take time to read the consent form and indicate whether you consent to each part of the study by ticking the box next to each item. Please sign and date the form and post it in the self-addressed envelope or if this is not possible, I will come to collect it myself at your school. If you need further information to help you decide, please contact me or my advisors through the contact details below. Thank you for reading this and for considering taking part in this study.

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4. INFORMATION SHEET FOR PARENTS/LEGAL GUARDIANS TO CONSENT FOR STUDENTS

Exploring the Facilitators and Barriers to Full Participation of Students who are Deaf or Hard of Hearing in Saudi Inclusive Schools

Your child is invited to participate in a study to explore the full participation of deaf or hard of hearing students in inclusive elementary schools in Saudi Arabia. This study is being conducted in partial fulfilment of a degree of Doctor of Education (EdD) under the supervision of Dr. Hannah Anglin-Jaffe and Dr. Christopher Boyle.

What is the purpose of the study?

The purpose of this study is to find out the ways in which deaf or hard of hearing students are supported to fully take part in all learning areas in inclusive elementary schools. This will help the researcher to identify things that support or hinder students' learning and how to better support teachers and students. I am particularly interested in understanding how the current practices in the school your child attends support deaf or hard of hearing students to be fully included in inclusive programmes. The study is not about personal judgement about your child.

Why is my child been invited?

Your child has been selected to participate in this study because he is deaf/hard of hearing and currently attending an inclusive school and he has the experience to be able to share his experiences related to his education and the things the school does to support him.

What is the procedure that is being implemented?

If you consent to your child to participate in this study, *he will be invited to contribute data* by participating in one-to-one interviews up to 40 minutes. The interview may be audio-recorded but if you choose not to have his voice recorded, hand-written notes will be taken by the researcher.

Does he have to take part?

Participation is not compulsory. It is entirely up to you to decide whether to you want him to take part. If you do decide that he takes part, you will be asked to sign a consent form for him in an addition to him also signing another consent on his own. You and your child will still be free to withdraw at any time and without giving a reason. A decision to withdraw or not to take part will not affect you or your child in any way.

What will happen to my child if he takes part?

If you decide your child would take part, the researcher will contact you by telephone or by email. Since this study is about getting your child's perspectives on his experiences, the researcher will find out how and where you want your child to be interviewed. Your child's involvement in the study would end after the interview.

What information do you need from me?

If you agree for your child to take part in the study, the only thing you need to do is to sign the consent form on behalf of your child and leave your contact details so that we can contact you to confirm that you understand what the study is about and would be happy for your child to take part.

Will I have to do anything differently?

No.

Are there any side effects, disadvantages and risks of my child taking part?

There are no disadvantages or risks to your child taking part in this research apart from the time he has to make available to participate as indicated on the information sheet. A Saudi sign language specialist will be available to support your child during the research process.

What are the possible benefits of my child taking part?

Your child's perspectives will contribute valuable information on how to improve education programmes that encourage full participation of deaf or hard of hearing students in inclusive schools.

What happens when the research study stops?

The data will be used to prepare a thesis and findings used to develop professional learning programmes for teachers who teach deaf or hard of hearing students in inclusive schools to support their skill development.

Will my child taking part in this study be kept confidential?

All information your child provided during this research will be kept strictly confidential. Your contact details and those of your child will be kept on a secure database at the University of Exeter and we will adhere to data protection laws by following a confidentiality protocol. Data will not include your child's name and data will be shredded and destroyed within after 5 years using confidential waste disposal systems at the University. Please note that if at any time during an interview you become concerned for your child's personal safety, you can withdraw your child's participation.

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